MIDWEST MARKETING ISSUE
Pages 13-26

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Tolerance for DDT Residues on Fat Meat Set at 7 ppm

But FDA Reminds No DDT Can Be Used On Dairy Animals

WASHINGTON, D.C.—A tolerance of 7 parts per million has been set for DDT by the Food and Drug Administration, Department of Health, Education, and Welfare, in or on the fat of meat from cattle, hogs, and sheep, and sweetpotatoes from postharvest use. The order, dated Feb. 13, 1957, was signed by John L. Harvey, commissioner of food and drugs, and appeared in the Federal Register of Feb. 19.

Although this tolerance has been set for meat, the FDA emphasizes that no tolerances have been set for DDT residues in milk, and reminds that application of DDT "in any manner to the feed of dairy cows or to the dairy cows themselves results in residues of DDT in milk."

The setting of a 7 ppm tolerance for DDT in the fat of cattle, hogs, and sheep was brought about following the filing of a petition requesting

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Inside You'll Find

Men, Money, Credit To Be Theme of NAC Convention

SAN FRANCISCO, CAL.—The spring meeting of the National Agricultural Chemicals Assn. begins here March 6 and continues through Friday, March 8. Men, money, credit and return on investment will be topics for consideration at the meeting, headquarters of which will be the Fairmont Hotel.

Speakers include Dr. S. B. Freeborn, provost of the University of California, Davis; Earl Coke, vice president, Bank of America and formerly assistant secretary of agriculture; J. A. Walker, general credit manager, Standard Oil Company of California; and F. C. Shanaman, president, Pennsylvania Salt Manufacturing Company of Washington.

Groundwork Laid for Rail Phosphate Hauls At Reduced Rates

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON, D.C.—The possibility of an arrangement with rail carriers for the transportation of phosphate rock from Florida at a reduced rate in connection with the hauling of coal into the state, appears a little brighter following a conference between rail representatives, electric power producers, and a number of coal company executives held here last week. The conference was called by Sen. Thruston B. Morton (R., Ky.).

Sen. Morton told Croplife that return load hauls of Florida phosphate rock on freight cars bringing coal to Florida consumers were a vital issue in the negotiations which will have to be conducted between the coal industry, consuming industries within Florida and the carriers themselves. Sen. Morton declined to set a timetable on the successful conclusion of his plan to get Appalachian coal moving into Florida, but he expressed the hope that something could be worked out and placed in operation within a year.

The senator said the conference here last week did not include representatives of agricultural chemical industry, since the session was primarily exploratory to determine if there were a common ground between the other three groups, from which point further studies would be made including those with the shippers of phosphate rock.

While the Senator's chief interest is to promote the use of coal deposits in the Appalachian coal range and particularly those of Kentucky, the magnitude of demand in Florida for fuel was growing at a pace which seems surely to lay the groundwork for some arrangement between the carriers and the Florida phosphate rock shippers.

Representatives of the coal industry present at the session with the Senator told Croplife that Florida phosphate rock shipments to northern and interior points now amounted to approximately 10 million tons

(Continued on page 5)

Withdrawal of Cotton, Corn Acreage to Soil Bank Poses Pesticide Sales Teaser

WASHINGTON—U.S. Department of Agriculture officials have indicated to congressional committees that the soil bank this year may trim as much as four million acres from the cotton allotment of 17.6 million acres and more than three million acres from the corn allotment of 37 million acres in the commercial corn belt.

This poses a neat teaser for the pesticide sales executives.

Industry spokesmen who have been sampling industry opinion say there is a cleavage of opinion within the industry ranks.

One school of thought says that even a cut of four million acres from the cotton acreage allotments for this year may not be of major significance to the pesticidal chemical industry. This side of the industry division of opinion holds that the four million acres which will be removed from production this year on the basis of USDA estimates would be the poorer land, fringe land and land that probably never would have gone into cotton production except under the stimulus of relatively high price supports for that crop.

They say further that on this type of land the cotton producer

(Continued on page 5)

★ ★ ★

Cost-Sharing Feature Available to Land in Acreage Reserve Plan

WASHINGTON — Land placed in the acreage reserve program of the soil bank is eligible for approved cover crop practices, the same as other cropland, under the Agricultural Conservation Program, Paul

(Continued on page 37)

NAC PRESIDENT OBSERVES . . .

Outlook for Pesticide Sales During 1957 Appear Promising

By FRED W. HATCH
Shell Chemical Corp., New York
President, National Agricultural Chemicals Assn.

Markets for agricultural chemicals today extend far beyond the farm. Our products are used in the city, on the highways and in the forest. This expansion is due primarily to one fact: Our industry has accepted the responsibility of being man's chief defense against insect damage.

By looking at our future from the viewpoint of this responsibility, we can see areas of future growth, in agricultural and non-agricultural areas.

The new federal program of highway construction is an example of a non-agricultural market. Forty thousand miles of highways will be built under the act passed by the 1956 Congress. A large new market for herbicides, fungicides and insecticides will develop with the landscaping and beautification of these roads. Pesticides should play a major role because of the saving in maintenance cost they represent.

Forest insect control is another market in which we can expand. There are 300 million acres of forestland in the United States. State and federal agencies and commercial lumber and paper companies are vitally interested in the growing of sound, healthy trees. The development of products to control pests such as the spruce budworm and the gypsy moth represents a start for us in helping these people fight off insect damage.

The damage that insects do to lawns and turf in a year should represent a bellwether to us since grass is the most extensive crop raised in the U.S. Termite control is another urban area of potential growth for the industry.

It is possible that the Federal Housing Administration may, in the near future, require termite-proofing of any house on which they grant a mortgage. Products now on the market guarantee termite control for five to seven years. Should the FHA insist on termite-proofing, a sharp increase in the sale of such products can be expected.

In agricultural markets the sale of our products still has a long way to climb to reach the saturation point. In some phases of farm pest control we have penetrated no further than 15-25% of the market potential. This is especially true of herbicide and soil fumigation programs.

Cotton and grain farmers, with some acreage now in the soil bank, should prove ready for new insecticide programs for their acres under cul-

(Continued on page 37)

Weed and Insect Pest Control Described At Annual Chemical Conference in Texas

LUBBOCK, TEXAS—The place of chemicals in West Texas agriculture, with emphasis on practical problems in production, was surveyed on the campus of Texas Tech in Lubbock at the fourth annual agricultural chemicals conference.

More than 400 agricultural chemical dealers, distributors, processors, manufacturers, Tech agriculture students and other interested persons attended sessions of the two-day meeting—the largest gathering in the conference's four year history.

Dr. Donald Ashdown, Tech horticulture and parks management professor, was conference chairman. Sessions included discussions on increased cotton acreage, insecticides, herbicides, modern weed control and feed supplements in livestock nutrition.

Sponsoring organizations were Texas Tech, the A&M College System of Texas, the Lubbock and West Texas Chambers of Commerce.

Speaking on "Can I Grow 3 Bales of Cotton per Acre?" Ted Siek, manager of the J. G. Boswell Ranch, Marienette, Ariz., told conference participants that in Arizona his organization had succeeded in growing two and one-half bales of cotton per acre.

He urged good cultural practices, variations and management to get full value from agricultural chemicals in raising cotton.

Cameron Siddall, southern district director, Pennsylvania Salt Manufacturing Co., Bryan, Texas, spoke on the Miller amendment passed in 1954.

William B. Ennis, coordinator, weed investigation agricultural research service, USDA, Beltsville, Md., reviewed the national research program for weed control.

He discussed the use of herbicides in the field of modern weed control, and bringing the problem more into line with conditions on the South Plains, he discussed the situation whereby herbicides are restricted to use in more humid areas than are found in West Texas.

Dr. W. O. Trogden, agronomist with Olin Mathieson Chemical Co., Houston, discussed fertilizers as they fit into the over-all picture of agriculture. Main trends of his discussion were on foliar feeding and liquid applications on plants. To date materials applied to leaves are restricted because of the expense involved, he said.

Speaking on insecticides, Dr. J. G. Watts said, "Over 40 species of insects have developed a resistance to insecticides. As long as we use large quantities of insecticides we can expect insect resistance to them to increase. In many cases this resistance is inherited by offspring of insects."

He urged expanded research for new chemicals and re-evaluation old ones which have been discar

"We must also re-evaluate the i situation of natural control," he the assembly. Using lady bee feeding on aphids as an example described a possible solution to problem as a combination of nat and chemical insecticides. He fur urged caution in buying quantitie lady beetles without first consul with county agents or USDA re sentatives.

Looking to the future, Dr. W said, someday we may be able to atomic radiation to fight insects.

Paul Marion, associate animal h bandman, described a rather unus research problem carried on at Texas A&M Substation No. 7 Spur, Texas.

He reviewed findings where eff tive use of antibiotics and cert hormones were increasing the g and feed efficiency of animals wh fed in combination with foliage.

In addition to hearing speake conference participants divided i sectional meetings with Floyd Lun Texas 4-H Club leader from Tex A&M, and G. H. Peters, execut assistant of the Tech adult educati program, as moderators to disc fertilizers, herbicides, insecticides a feeding supplements.

Presiding over meetings were D W. L. Stangel, Tech school of ag culture dean, Dr. A. W. Young, Te agronomy department head, and D John S. Rogers, Texas A&M agron my department head.

Equipment demonstrations and e hibits of agricultural chemical m chinery and equipment were also he at the Tech agronomy farm and t Tech agricultural engineering buil ing annex.

American Potash Sales and Earnings Set Record in 1956

LOS ANGELES—Sales and ear ings of American Potash & Chemic Corp. surpassed all previous recor in the year ended Dec. 31, 1956, Pet Colefax, president, has announced.

Net sales of the company durin 1956 were $41,750,628 as compare with $27,731,612 for the precedin year, representing a 50% increase.

Net income for the year 1956 wa $5,103,091, an increase of 26% ov the $4,060,192 reported for 195 After preferred dividends the 195 earnings were equal to $2.64 a shar on the 1,847,554 class A and commo shares outstanding at Dec. 31 las Earnings in 1955 were equal to $2.4 per share on the 1,560,943 class A an common shares then outstandin after adjusting for the 2½-for-1 stoc split effected in April, 1956.

Sales and earnings of Americ Lithium Chemicals, Inc., in whic American Potash holds 50.1% inte est, were consolidated for the fir time. In addition, the consolidated re sults reflect a full year's shipmen from the Henderson, Nev., plant com pared with shipments for two month in the preceding year.

Mr. Colefax said highlights of th year included improvement in opera ing efficiencies at each of the com pany's plants, increased productio facilities and expansion of the re search program.

Research during 1956 led to the de velopment of processes for the manu facture of high purity boron, ne boron compounds, lithium metal an various lithium salts, Mr. Colef said. Market development activiti continued to center on the promotio of new boron compounds and pote tial additional lithium chemicals, h added.

Capital expenditures on plant im provements and additions during 195 were approximately $4,000,000, com pared with about $3,000,000 in 195 The company is planning to constru a $5,000,000 plant for the productio of sodium chlorate at Aberdeen, Miss which will be ready by mid-summe 1958, Mr. Colefax said.

INSECT AND PLANT DISEASE NOTES

Plant Diseases and Insects for South Carolina

CLEMSON, S.C.—A sample of diseased onion plants was received in February from a 25 acre field of green bunching onions in Lexington County. The onion leaves were covered with small tan lesions, and the disease was identified as blast, caused by the same fungus which causes onion neck rot. Until recently, this disease was thought to be caused by adverse weather conditions, since there is no fungus present in the dead leaf spots. The fungus is a saprophyte which grows on crop refuse in the soil and commonly on the dead leaf tips. The gray mold may be observed early in the morning on the dead leaf tips.

The spores from these leaf tips are blown by the wind to healthy leaves. The spore germinates and, during germination, secretes a toxic chemical which causes the death of the surrounding tissue. The fungus does not penetrate the leaf as most leaf spot producing fungi do.

The most effective control procedure is the use of crop rotation. Onions should never be planted on land on which onions were grown the previous year. Zineb dust or spray will control blast, but in South Carolina where onions for bulbs are planted in October and harvested in May, the number of fungicide applications required would make the cost of control prohibitive. Where onions are grown for bunching or are grown from sets, blast may be controlled profitably by use of zineb. The fungicide should be applied at weekly intervals during warm humid weather, the applications beginning as soon as the first symptoms of blast are observed. The disease will not cause serious losses except in the warm, humid winter weather which has been prevalent in January and February 1957.

Although fewer boll weevils were found hibernating in many cotton areas of South Carolina, they are still considered numerous enough to cause early-season trouble, according to USDA. In Louisiana, Mississippi, South Carolina, Arkansas and parts of North Carolina, boll weevil numbers surveyed last fall were below the very high counts of the previous year. However, it is pointed out in South Carolina, that weather conditions favorable to development of this cotton pest might still bring out damaging numbers this spring.

Light trap reports from Clemson, Charleston and Florence, S.C., indicate considerable activity by adults of armyworm and yellow-stri... armyworm as well as the black, p... sided and granulate cutworm. ... adults of Southern potato wirewo... were captured, the S.C. report say...

Colorado Calculates Insect Losses for 1956

FT. COLLINS, COL.—Agricultu... losses to insects in Colorado dur... 1956 were heavy, according to the ... nual report issued by the insect ... tection committee of the agricultu... experiment station here.

The pale western cutworm ... charged with destroying crops t... would have produced 195,773 bush... of wheat, while aphids destroyed ... estimated 160,592 tons of alfalfa ... tended for feed, amounting to ab... 11% of the crop. The loss of alfa... seed in northeastern counties w... estimated at about 13,350 lb.

Combined depredations of worm... mites and aphids reduced the c... crop by 440,509 bushels, or 3.9% ... the potential harvest.

Barley suffered to the extent ... 99,325 bushels, 2.5% of the cro... The corn leaf aphid and cutworm... took 110,000 bu. sorghums. Som... 19,000 tons of sugar beets wer... lost to a variety of insects, whil... the Mexican bean beetle ate 10%... or 8,300 tons of the bean crop.

A large array of crawlers and flie... destroyed 368,722 sacks of potato... 3.6% of the crop. Loss on tomato... was 537 tons; on cabbage, 1,154 to... 2.9% of the crop; on spinach, 7,0... bushels or 3.9%.

The green pea destruction, ho... ever, was light, only 152 tons. B... lettuce enough for 5,115 crates w... eaten by webworms.

Approximately 9.6% of the swe... corn crop—140,990 crates—was eat... by earworms and maggots. Popco... loss was set at 75,000 bushels, ... 12.5% of the crop. Several species ... insects ruined 47,010 bushels of a... ples, 40,693 bushels of peaches.

Rat Control Program Planned for Iowa

AMES, IOWA—Agricultural lea... ers in Iowa are being urged to put ... intensive rat control program ... throughout the state. This campai... will be carried out in urban as w... as rural communities.

The possibility of heavy chinchb... populations in the southern porti... of the state was pointed out in an i... formation letter by Harold Gunde... son, extension entomologist. Althou... the overwintering population ... chinch bugs currently is greater th... that of a year ago, a great deal ... pends upon weather developmen... whether a serious infestation is to ... expected.

Winter weather may still destroy ... high percentage of hibernating bu... he said. A wet spring will cause t... death of more of them, but a war... dry spring will favor establishme... and buildup in small grain.

Minnesota Expects Pine Insect to Develop in '57

ST. PAUL, MINN. — A threat ... jack pine budworm is concerning ... tomologists in Minnesota, accord... to T. L. Aamodt, director and st... entomologist, St. Paul. In a letter ... his coperators, Dr. Aamodt says th... this pest threatens some 200,000 ac... of valuable jack pine in the sta... "Other insects, like the spruce bu... worm which is attacking spruce a... balsam, and our highest populati... of grasshoppers in more than a d... ade, emphasize the economic imp... tance of these problems.

"These are bad enough, it wo... seem, but still another threat of gr... importance to Minnesota farm... stems from the detection here ... the first time in 1956 of the spott... alfalfa aphid. This insect has ravag... alfalfa in the southwest and far w... since it first appeared in this coun... in 1954. Entomologists are grea...

cerned that it may cause similar age in Minnesota if it becomes blished here in quantity."

ruary Survey Shows Big Infestation

THENS, GA.—Light infestations potted alfalfa aphid and pea aphid e reported in the state following insect survey which ended Feb. It was indicated that no controls needed at this time.

Vegetable weevils were light to derate on tobacco beds in Worth, ok, Clinch, Lanier, Ware and ffee Counties, but heavy in Tift d Tattnall.

obacco flea beetles, light in rth, Cook, Ware, Clinch and Cof- Counties, moderate in Lanier and t; heavy in Tattnall County. Moderate infestations of Eastern t caterpillar were found on wild rry through south Georgia, the vey indicated.—C. R. Jordan.

SOIL BANK

(Continued from page 1)

ormally would not cultivate the rop as thoroughly and intensively s he would his better land. In hort, he would hold down expense ems on this land and prefer to ut his dollar chips on the top uality land.

While this school of opinion agrees at removal of four million acres of nd from cotton production will re- lt in a lower crop, it contends that the cotton producer obtains pay- ents for withdrawing low produc- g acreage out of production he ll intensify his cultivation and re of that part of the crop grown the better land.

That will mean, according to these dustry spokesmen, that more plant ods and more pesticidal chemicals ill be used this year than ever be- re, and that in the long run the tion may expect higher yields per re from the land remaining in cot- n cultivation.

The other school of opinion on this ossible reduction of cotton and corn reage from the 1957 crops lacks the rsuasive case set forth by the in- stry optimists. This group says at a four million acre cut from already sharply reduced cotton reage must include some fairly od cotton land as well as cleaning t remaining fringe farms. These okesmen are saying that the in- eased intensive cultivation cannot expected to take up the slack at an additional cut of four mil- on acres from the cotton acreage ill mean to industry sales.

On the basis of the fetching per- asive quality of the optimists it ust be said from here that they et the technical victory prior to the howdown, which will only be known hen the sales registers are totalled p at the end of the sales season.

If it should result in merely a tandoff, the optimists have made a oint and the industry as a whole ill have gained some broad experi- nce in the capacity to expand sales n the basis of proven experience at he farm level in terms of higher roduction at lower per unit cost. erhaps the risk of reduced sales his year may pay off many fold on his testing ground this crop year.

One other factor yet to be dis- losed is that of improvement of oisture conditions in Texas and the outhwest. Reports of recent heavy renching rains in that drouth area ay finally persuade cotton farmers ho have contracted for soil bank articipation in the acreage reserve hase of the bank to cancel their ontracts with USDA and plant an- ther crop.

If the relief from those rains has een as broad as reported it is en- irely possible that substantial with- rawal from the soil bank may be ontemplated in the Texas-Oklahoma rea of the cotton belt.

Program Announced For Wisconsin Nitrogen Day Institute March 5

MADISON, WIS.—The program for the Nitrogen Day Institute, to be held March 5 in Turner Hall, Monroe, Wis., has been announced by C. J. Chapman, University of Wisconsin extension specialist in soils.

Among the speakers and their topics will be:

J. T. Murdock, University of Wisconsin, "Nitrogen Fertilizer for More Abundant Pastures"; W. B. Griem, Wisconsin Feed and Fertilizer Inspection Service, "An Explanation of the Different Kinds of Nitrogen Fertilizers"; Walter Renk, Wm. F. Renk & Sons, Sun Prairie, Wis., "Nitrogen Fertilizers Have Boosted Our Yields of Corn"; K. C. Berger, University of Wisconsin, "Nitrogen Fertilizer Use Has Increased the Need for Minerals, Both Major and Minor"; C. J. Chapman, University of Wisconsin, "Food Production Unlimited with Nitrogen Fertilizer"; Edward H. Tyner, University of Illinois, "Types of Farming as They Affect Nitrogen Needs."

Myron Jeglum, Green County agent, will preside at the morning session, and O. J. Attoe, chairman of the University of Wisconsin soils department, will preside at the afternoon session. The program will open at 9:30 a.m. and close at 4 p.m.

PHOSPHATE HAULS

(Continued from page 1)

annually. The Senator estimated that Florida requirements for energy would double every five years to keep pace with the growth of industry and population in that state.

It was not disclosed at what point the agricultural chemical companies would enter into the discussions, but it was clear that the door was wide open for their future participation as the other parties to the problem undertook more detailed study of the issue.

Virginia-Carolina Chemical Corp., Richmond, Va., a major shipper of phosphate rock from Florida, earlier had contacted at least two rail lines serving Florida, strongly suggesting that arrangements be made for two-way hauls of coal and phosphate in order to reduce freight costs on phosphate shipments out of Florida (Croplife, Feb. 25, page 8). William H. Wilson, V-C president, requested the railroads to give prompt attention to the matter, since his company seriously considers "the possibility of using water transportation if we cannot realize important economies by using the railroads."

Sen. Morton's role appeared as that of a catalyst—a common meeting point for all involved, and it is believed that having launched the project, he will retain only a guiding hand as arbitrator for the groups and leave them to their own devices.

Du Pont to Expand Urea-Ammoniating Solutions Output

WILMINGTON, DEL.—Planned expansion of production facilities for "Uramon" ammonia liquors at Du Pont's Belle Works in West Virginia has been announced by F. M. Jornlin, nitrogen products sales manager.

The new production facilities, part of the Belle Works' over-all modernization program, are expected to be completed in 1959. The plant's extensive high pressure synthesis facilities are gradually being converted to use natural gas instead of coal as a basic raw material.

In conjunction with plant modernization, the company is expanding its research in the development of new ammoniating formulations. The technical services now available to customers also are being etxended both at the Polychemicals sales service laboratory near Wilmington, and in the field, Mr. Jornlin said.

Recently, the department appointed three new technical specialists, and the nitrogen products sales force, all of whom are technically trained, also is being enlarged.

"Our plant modernization and expanded research programs," Mr. Jornlin said, "assure producers of both conventional and granular mixed fertilizers of an increasing supply of high quality urea-ammoniating solutions. This is further evidence of the growing importance of urea as a nitrogen source for the fertilizer industry."

The Belle Works, established in 1926, produces ammonia; chemical intermediates for nylon; urea for fertilizers, cattle feeds, medicinals and adhesives; hydrogenated oils and other industrial chemicals; automotive anti-freeze solutions; and intermediates for plastic resins.

Dow Appoints Two To Research Posts

MIDLAND, MICH.—The Dow Chemical Co. has announced the appointment of two researchers to key positions in its research organization.

Dr. T. R. Norton, director of the agricultural chemicals laboratory at Midland for the past four years, has been appointed assistant director of the Edgar C. Britton Research Laboratory. He joined the company's western division at Pittsburg, Cal., in 1945. Before transferring to Midland in 1953, he was supervisor of the organic section of the company's Pittsburg laboratory.

Eldon L. Graham has been named to the company's executive research staff and will serve as a technical expert with the pilot plant coordination group. He had been with the physical research laboratory since 1947, having been appointed a project leader in 1953 and a group leader in 1955.

Mississippi Group Aims for Progress With Organizations

BILOXI, MISS.—Unity and pr ress through organization was theme of the first annual Mississi Aerial Applicators convention at Edgewater Gulf Hotel in Biloxi.

Nearly all of the area's ma aerial applicating firms were rep sented at the meeting. Lt. Gov. C roll Gartin pointed out that by formation of this organization by its continued growth, other peo would more readily see the aerial plicators problems and join with th in solving these problems.

Frank Wignall, Civil Aeronaut Administration, outlined what his ganization was doing toward safe of aircraft and flying safety, alo with the safety precautions in the u of poisonous chemicals. Bud Moo director of the Mississippi Aerona tics Commission, pointed out that organization was more interested helping the aerial applicators of M sissippi than regulating them in th operations.

Research and Extension servi personnel from Mississippi State C lege and research personnel from t Delta Branch Experiment Station Stoneville explained the latest search information available and re ommendations for 1957 in Mississip

At the business meeting, last yea officers were reelected. They a Mabry Anderson, Clarksdale, pre dent; Vic Sutter, Greenwood, vi president, and Larry Wade, Rolli Fork, secretary-treasurer.

Reader Views

Dear Editor:

Congratulations on the Feb. 11 i sue of Croplife, and particularly the report of the survey you ma among the state legislatures in refe ence to the model fertilizer laws. think this gives an excellent analys of the status of the proposed law a I think the Industry will be indebt to you for bringing this informati out in the unbiased manner in whi it is handled.

We note that some of the contr chemists think that there is a chan to educate the fertilizer manufa turers to accept the change in met od of guarantee if enough education work is done. It is my personal opi ion that the more the fertilizer pe ple learn of the implications of the proposed changes, the less likely a they to agree. I think the manufa turers of Pennsylvania confirmed th point of view. We understand th when the National Plant Food Inst tute survey was made, two thirds the Pennsylvania manufacturers we favorable; however at the rece meeting in Harrisburg, Pennsylvan a secret poll indicated that two thir of the manufacturers were oppos to the changes.

This switch shows the effect of t manufacturers becoming acquaint with the proposed law insofar as may affect their own business.

Thanks for the splendid way which you and your journal have ha dled this controversial matter!

E. W. Harvey
Director of Technical Servi
Nitrogen Division
Allied Chemical & Dye Corp
New York, N.Y.

CATTLE GRUB CONTROL

PORTLAND, ORE. — An organ phosphate which is only slightly tox to warm-blooded animals, has co trolled from 92 to 100% of all cat grubs in Oregon State college exper ments during the past two years. T material, known as ET-57, is given animals in doses by the mouth.

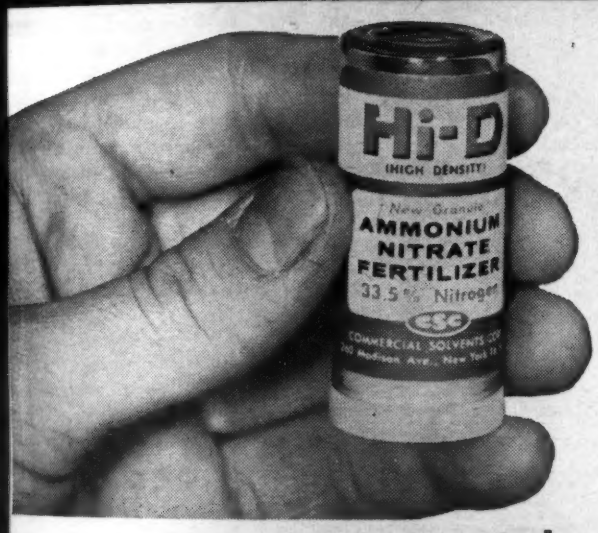
NEWEST NITROGEN FERTILIZER

at your dealer's now!

THIS ADVERTISEMENT sells new

Hi-D

Ammonium Nitrate Fertilizer. It appears in April issues of *Capper's Farmer, The Progressive Farmer, Prairie Farmer,* and *Farm and Ranch,* March issue of *Florida Grower and Rancher.*



see a sample at your dealer's

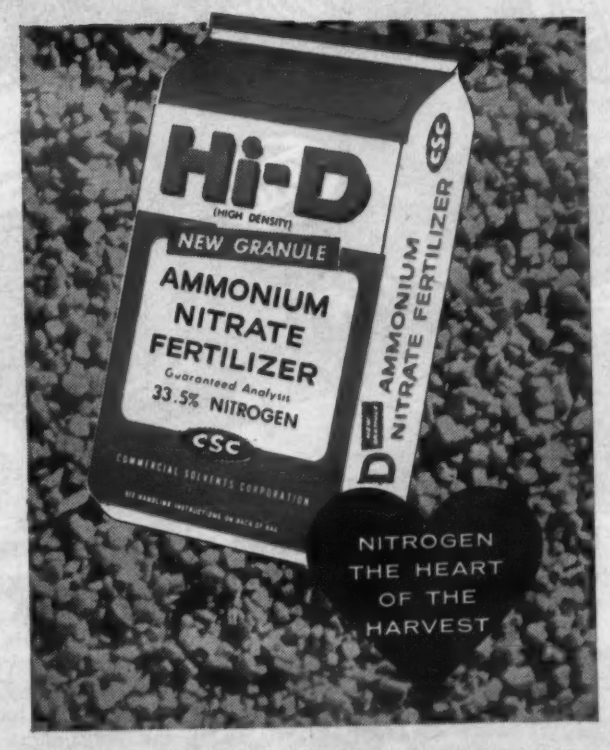
no other ammonium nitrate like it!

Ask your dealer for a sample. See for yourself the advantages of using new Hi-D. An exclusive patented process produces a high density ammonium nitrate with the maximum moisture "squeezed" out. Hi-D is made dry, coated dry and bagged dry. In addition, the controlled size and unique shape of these new granules assure even distribution in all types of spreading operations under all field conditions. Hi-D flows freely, spreads evenly, stays put. It won't gum-up, clog, cake or bridge even on hot, humid days.

Hi-D Ammonium Nitrate contains the 2 key types of nitrogen—the kind of nitrogen in sodium nitrate *and* the kind in ammonium sulphate as well! That's not all. 100 pounds of Hi-D gives you as much nitrogen as 159 pounds of ammonium sulphate or as much nitrogen as 209 pounds of sodium nitrate! The total nitrogen in Hi-D, guaranteed at 33.5%, gives 2-speed fertilizing action. 16.75% *nitrate* nitrogen goes to work fast for good, vigorous starts. 16.75% *ammonia* nitrogen follows up later for a sustaining boost to growth.

There's another kind of value in Hi-D, too. Its high density means less bulk—10 bags stack in the same space as 8 bags of other types of nitrate. In the field this means you get up to 25% more nitrogen from a normal hopper load—you cover more ground per load.

Put the crop-boosting power of Hi-D to work for you this season. And remember, Hi-D should be just one part of your program for productivity. Don't forget—there's no substitute for balanced fertilizers. And, as a nitrogen supplement to the balanced fertilizer your dealer recommends, there's nothing better than Hi-D. See your dealer. Ask for Hi-D—in the green and white bag. You can trust Hi-D in the field and in the yield.



COMMERCIAL SOLVENTS CORPORATION — STERLINGTON, LA. — ST. LOUIS, MO. — ATLANTA, GA. — TERRE HAUTE, IND.

Insect and Plant Disease Control Brought Up-to-Date At USDA Regional Briefings

WASHINGTON, D.C.—The last of four regional meetings on insect and plant disease control was held at Mississippi State College, State College, Miss. Feb. 25-27, to complete a series which began at Rutgers University, New Brunswick, N.J. Feb. 6. Subsequent meetings were held at the University of California (Feb. 13-15); and the University of Minnesota, (Feb. 18-20).

Sponsored by the Agricultural Research Service of USDA, topics discussed at the four meetings centered around federal-state quarantines against importation and movement of insect- or disease-carrying products; plant-pest surveys to detect first signs of an insect or plant disease new to a region or a country; research to help provide tools for control and eradication of pests already a problem and to keep ahead of possible future problems; and federal-state programs for control and eradication of plant disease and insect pests of regional or national significance.

The importance of constant vigilance was emphasized in many of the talks made at the conferences. Frank A. Todd, assistant to the administrator of the ARS, said that biological warfare would bring rural areas of the U.S. as much into any future global conflict as urban communities.

He noted the importance of safeguards against entry and establishment of foreign "pests"—animal and plant diseases, as part of our nation's defense against such possible attack.

"If there were no barriers to plant disease entry, the U.S. could readily become the habitat for a host of plant diseases which are not now known in this country," he said.

Therefore, he added, there is an ever-increasing need for strengthening our defenses or regulatory organizations "to meet the potential threat of our modern world in peacetime as well as during a nation emergency."

Mr. Todd explained that country-wide state-federal cooperative regulatory programs, with their quarantine, survey, control and eradication procedures, provide the basis for emergency organization and the knowledge required to help combat the potential introduction by enemies of biological warfare against animals and crops.

More knowledge of agricultural pest problems elsewhere in the world is needed to give strength to regulatory and control efforts, he stated. As an example, he explained that "plant pest control officials were able to move effectively against the Mediterranean fruit fly in Florida, partly as the result of research work in Hawaii. The Hawaii information was quickly adapted to the Florida situation, permitting specialists to move ahead with assurance that they were doing the right thing."

E. D. Burgess, chief of the plant pest control branch of Agricultural Research Service, Washington, D.C., told the groups that eradication programs are being launched against certain pests in the U.S., and success is expected in some cases. The key to the matter, he said, is to get such a program under way before infestations become general over a large area, and also the need for prompt research information that will permit public agencies to undertake aggressive corrective action even if initial costs appear to be prohibitive.

The case of the recently-inaugurated program against the gypsy moth was presented as a case in point. He said this insect has been in the U.S. for about 75 years, and no doubt many people wonder why this pest wasn't eradicated promptly when it first became known. Actually, efforts were made to eradicate it, but adequate measures were not then available and public interest lagged at a time when it might have been accomplished even under those early conditions.

"Only since the development of DDT has a tool become available which is effective enough to warrant an eradication program over the ... million acres in which it (gypsy moth) exists," he said. Mr. Burgess went on to say that a battle of containment is worth while, since it keeps a pest in a relatively small area, compared to its potential range in the U.S. Prevention of spread through the years has thus saved individuals, communities, or states, as the case may be, large amounts of money that otherwise would be needed for control in the south and mid-west where it does not now occur.

The speaker pointed out, however, that an eradication effort is most often an exception rather than the rule, and usually something short of this is undertaken.

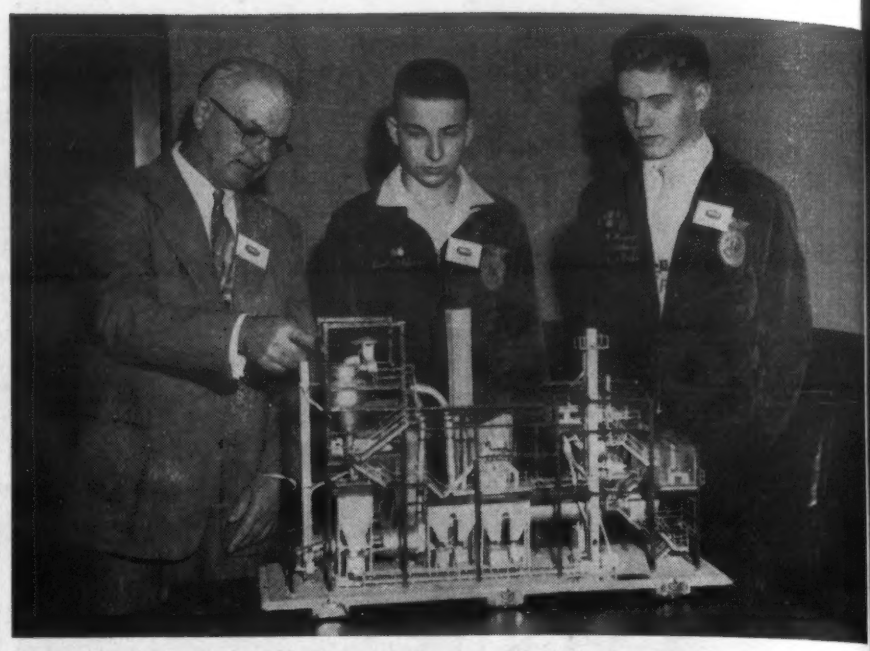
Participating in the meetings, in addition to USDA personnel, were state agricultural officials, entomologists, plant pathologists, nematologists, and state and USDA regulatory officials. The meetings were all well attended.

Acreage Reserve Sign-Ups Exceed 15 Million Acres

WASHINGTON—Up to Feb. 15 a total of 573,833 acreage reserve agreements had been signed by farmers, placing 15,351,968 acres in the 1957 acreage reserve part of the soil bank. The agreements cover 1,707,321 acres of corn, 1,798,6... acres of cotton, 95,135 acres of rice, 40,502 acres of tobacco and 11,61... 396 acres of wheat.

FARM SUPPLY FIRM

FAIRMONT, MINN.—The Baxter Farm Service Co. has been organized here by Raymond Baxter. The firm will deal in feeds, fertilizer and seeds.



TOP CORN GROWERS—Two of the top participants in Spencer Chemical Co.'s annual efficient corn growing contest examine a model of a fertilizer granulation plant. Bob Ehlers and Herbert Kraeger, both vocational agriculture students at Plattsmouth (Neb.) High School, shown here with Bob's father, Otto Ehlers, were among 34 top participants selected in the annual demonstration of efficient corn production methods sponsored by Spencer.

Spencer Honors Top Participants In Corn Program

KANSAS CITY — Young farmers from Nebraska to South Carolina, most of them wearing their blue corduroy FFA jackets, gathered in Kansas City and Memphis recently to tell how they qualified as "efficiency experts" in the art of growing corn.

The group of 34 represented the top participants in Spencer Chemical Co.'s annual efficient corn growing program. Held this year in 16 states, the program was climaxed with a 3-day expense-paid trip for the entrants judged tops in efficiency. Accompanied by their vocational agriculture teachers, winners from the South were entertained in Memphis, and a week later, those from the Midwest were feted in Kansas City. Activities for both groups included tours of industrial plants, sight-seeing and an honors banquet.

To qualify for the trip each participant was required to grow two one-acre plots of corn side by side. On one plot he followed the usual corn-growing practices used on his farm. On the other plot he used practices which, in his judgment, would contribute to a more efficient and profitable yield.

Although increasing efficiency and use of up-to-date practices were stressed above an attempt at maximum yield, the average of all the "new practices" plots harvested by the winners was 114 bu. as compared to 74.6 bu. for the "old practices" plots.

Despite greater expenditure for fertilizer seed, herbicides and pesticides on the new practices plot, the increase in yield also brought a decrease in unit cost of production. Average per bushel cost on the "new" plot was 62¢, 20¢ less than it cost to raise a bushel of corn on the "old" plot.

Basic reasons for the improved profits and efficiency were increase in the number of plants per acre (9,600 "old" 13,800 "new") and the use of fertilizer. Average applications of nitrogen went from 27.5 to 97.7 lb. per acre. Phosphorus went from 27.3 to 65.8 and potash from 23.9 to 65.1.

Atlas Powder Co. Net Earnings Show 21% Gain in 1956

WILMINGTON, DEL.—Atlas Powder Co.'s net earnings from its explosives and chemicals operations rose 21% in 1956 to a record high of $4,205,992, or $5.61 a common share, Ralph K. Gottshall, president, stated recently in the annual report to stockholders. In 1955, earnings totaled $3,480,469, or $4.70 a common share.

Sales and operating revenues of $67,080,045 in 1956 also were at a new high, up 11% from the $60,340,583 reported for 1955. The 1956 figure includes sales of the Aquaness department, which became part of the Atlas chemicals division in January, 1956. The 1955 total includes sales of the former Atlas industrial finishes division until that operation was disposed of in the spring of 1955.

Earnings before federal income taxes in 1956 were $9,010,992, a 25 per cent increase over 1955 pretax earnings of $7,207,469.

Common dividends of $2.40 a share were paid in 1956, compared with $2.30 a share in 1955. There were 749,502 common shares outstanding on December 31, 1956, against 727,526 shares a year earlier.

WASHINGTON SUPPLY STORE

MESA, WASH.—Mark Bodovinitz and son Mark, Jr. will manage a new feed and fertilizer supply store here. The store will stock a complete line of Swift and Co. feeds and fertilizers.

William Arnold Sikkel

STAUFFER APPOINTMENT—William Arnold Sikkel has joined the agricultural division of Stauffer Chemical Co. as a salesman in the Midwest region. His territory includes Michigan, western Ohio and northern Indiana. Mr. Sikkel served with the army during World War II, and currently is a major in the Michigan National Guard. Mr. Sikkel was connected with the Smith Agricultural Chemical Co. for seven years before joining Stauffer. He resides with his wife and three children in Holland, Mich.

St. Regis Paper Co. Reports Peak Sales

NEW YORK—St. Regis Paper Co. sales and net income for 1956 reached record levels, according to preliminary figures in a recent company statement. Directors indicated that net sales were approximately $330,000,000, compared with $257,056,527 for 1955.

The company's profit from operations amounted to about $46,700,000 in 1956, compared with $38,816,830 in 1955.

Net income for 1956 reached a level of $22,500,000, equal after preferred dividends, to about $3.15 a share on 6,953,990 shares outstanding at the end of the year. This compared with $19,047,755, equal to $2.95 a share on 6,266,115 common shares outstanding at the close of 1955.

The company reported that if results of its recently acquired companies had been included for the full year, net sales would have been in excess of $340,000,000 with net income at about $23,300,000, equal after preferred dividends to approximately $3.27 a share on the 6,953,990 common shares outstanding at the end of the year.

C. George Krieger in New Ethyl Corp. Post

NEW YORK—C. George Krieger has been named special assistant to James E. Boudreau, director of public relations for the Ethyl Corp., the firm has announced. Mr. Krieger, well-known for his activities in the National Agricultural Chemicals Assn., has been with Ethyl since 1929. His new assignment will be in the agricultural field, with emphasis on helping farmers to realize maximum benefits of power equipment.

Hole in One

ANTIOCH, CAL.—Harold Smart is not only a skillful airplane pilot duster but a lucky if not an equally skillful golfer. Mr. Smart, who owns a crop dusting concern in Brentwood near here, made a hole in one on the Antioch Municipal Golf Links—after only ten months playing the game. There were seven witnesses to attest to the feat—accomplished with a number seven iron on the ninth hole of the course.

Advisory Group Asks for Farm Adjustment Guides

WASHINGTON—A research program aimed at providing guidelines for present-day and long-range farm production has been requested by the U.S. Department of Agriculture's production economics research advisory committee.

During the group's recent meeting in Washington the need for additional research information to help farmers and industry make adjustments when necessary was emphasized. Economic studies to guide the development of public programs in agriculture were especially underlined.

The committee, established under the Research and Marketing Act of 1946, meets annually. Research proposals for new or expanded studies in eight categories were considered by the committee. Among them were:

Adjustments in farming: Research to provide a basis for determining alternative farm program proposals, for evaluating the effectiveness of present new programs and for guiding development of various public assistance programs.

Production, income and costs: Research to determine farm production response to changes in technology, cost of production, and cost-price relationships.

Farming efficiency: Research to measure and evaluate the effects of specific technological changes on farming, including the impact of technology on livestock production.

Farm labor: Research on impacts of technology and farm adjustment programs on labor needs and the effect of labor supplies on technology.

Farm finance: Research on new types of credit arrangements to help make adjustments for specific farming types and situations. Nation-wide research on the financial condition of farmers.

Resource use and development: Research on existing water laws and on proposed changes in water laws.

Land values and land tenure: Studies on the effects of government farm programs on farm land values and the tenure system.

Forestry and timber production: Research on timber production to obtain information on costs and returns under different conditions.

AWARDS PROGRAM

WASHINGTON—The Manufacturing Chemists' Assn. has announced that this coming June it will present six medals and awards for outstanding teaching of chemistry at the under-graduate level in American colleges and universities. These awards are being made in recognition of the vital importance of work done by college teachers in the training and inspiring of the future scientists and other technical graduates essential to the nation's progress. Cash awards of $1,000 each as well as medals and citations, will be granted to the winners.

NEW SWIFT & CO. PLANT—Above photos show views of the new 40,000-ton-a-year fertilizer plant of Swift & Co., St. Joseph, Mo. The firm held an open house for the public on Feb. 17 (Croplife, Feb. 18, page 1) and for dealers and other business associates the previous day. Top photo shows front of new office and loading dock. Center photo is looking down the aisle in the storage bins, with visitors being shown the facilities. Bottom photo is general view of part of the crowd of visitors who attended the open house on Feb. 17. The new plant will serve a territory comprising western Missouri, and the states of Nebraska, Kansas, Colorado and part of Oklahoma. These areas were formerly served by Swift's plants in Mason City, Iowa and National Stock Yards, Ill.

SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

What does it cost the dealer to sell a ton of fertilizer? A cost figure is hard to pin down and because of this difficulty, there is little information available which might be useful as a guide for comparison purposes. The Nebraska Fertilizer Institute, Inc., has provided a real service to all dealers in making a cost-per-ton survey. Many dealers will be surprised to learn that it costs more to merchandise a ton of fertilizer than they had realized. A great deal of planning went into the Nebraska survey to make it accurate and we agree with Leo L. Johnson, field secretary of the Nebraska Fertilizer Institute that this survey is "rather interesting."

The results of the survey showed that the Nebraska dealer's cost on a per-ton basis, not including an allowance for profit, are as follows:

Storage	$4.41
Taxes	.92
Selling costs—rent, lights, water, electricity, one girl and two men	1.42
Breakage	.98
Advertising costs	.94
Bad debts	.28
Contributions and donations	.22
Inventory insurance	.45
Total cost per ton	$9.62

James Kenner, Nebraska banker, past president of the Nebraska Bankers Assn., and long-time friend of the industry who has a thorough grasp of the meaning of proper fertilization on farms, offers some worthwhile comments on the Nebraska Fertilizer Institute's survey. Says Mr. Kenner: "If all of these things (storage, taxes, selling costs, etc.) were analyzed and considered when operating a fertilizer business, there would not be any price cutting by the dealers and better service would be given to the customer."

Mr. Kenner also makes some suggestions to dealers who want to make their operations more successful and profitable. They are:

1. **Have a long range aspect of the business future.**
2. **Obtain maximum amount of help with minimum expense.**
3. **Standardization of the inventory.**
4. **Know your costs of operation—unit-wise and total.**
5. **Removal of dead or slow moving stock.**
6. **Persistence.**

Wisconsin Firm Has A Plan

An understanding of the farmer and his everyday problems is credited by the management of the Hanley Implement Co., Sun Prairie, Wis., for establishing the firm as one of the leading farm suppliers in the area. The company's selling program is based on personal contact, credit in tune with income and an awareness that farmers have special needs.

The Hanley management believes in saturation advertising in its trade area. Radio, television, newspapers and direct mail are used. About 2% of the gross sales is spent on the advertising budget every year.

A reputation for service and fair dealing is carefully maintained. A backlog of goodwill is a commodity which money won't buy but which comes from years of fair dealing with customers.

The Hanley store promotes trade-ins on used equipment and actually shows a profit in the resale of rebuilt items.

The personal touch in selling is stressed, The outside salesmen know the farmers in their areas and treat them as friends. Visiting with farmers may not immediately make a sale but eventually it usually does, the management feels.

Demonstrations play an important role in the Hanley merchandising scheme.

Employee bonuses are paid for leads. Every person in the store is eligible for bonuses. This makes the entire staff eager to make sales and keeps morale high while increasing business for the store.

The Hanley store has achieved the success it deserves but it hasn't come from hit-and-miss merchandising, as is evident from scanning its carefully planned program.

Trend to Ten

More manufacturers will, one by one, adopt decimal packaging to replace the long-established custom of selling certain products by the dozen or by the gross. Market observers feel, however, that the trend is slow moving and will probably take many years. When it comes, it will mean that the salesman's task will be eased considerably. The trend, however, has already given us nostalgic feelings about a "baker's dozen," "half a dozen" and similar selling expressions which have become so well established over the years.

Wisconsin Tonnage Decreases in 1956

MADISON, WIS.—Wisconsin fertilizer shipments during 1956 totaled 408,221 tons, a decrease of 3.28% from 422,044 tons in 1955, according to the Wisconsin Department of Agriculture.

The 1956 total was comprised of 308,180 tons of complete mixed goods, 69,049 tons of phosphate and potash mixtures, 3,282 tons of superphosphates and 27,710 tons of other materials.

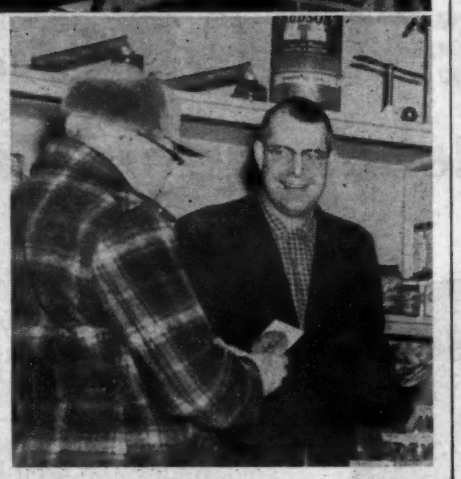
CORN BORER CONTROL

Latest recommendations on how to get good and profitable control of corn borers in field corn have been published by the University of Illinois College of Agriculture. This new publication is Circular 768, "Controlling Corn Borers in Field Corn With Insecticides," by W. H. Luckmann and H. B. Petty.

Special Merchandising Section

Better Selling

Marketing News and Features



AT IOWA FIRM—In the top photo is a scene at the Sar Seed Co., Charles City, Iowa, showing the displays at the firm's Seed and Fertilizer Show. In the lower photo Robert Sar, right, is shown making a sale to a customer.

Enthusiasm for Soil Pays Off For Iowa Firm

By AL P. NELSON
Croplife Special Writer

A new farm supply store at Charles City, Iowa is owned by the Sar Seed Co., and it attracts farmers and gardeners who find a wide variety of farm and garden merchandise, including fertilizers, on display.

Robert and Allen Sar, owners, are fertilizer and seed enthusiasts. They like to talk soil, fertilizer and seed conditions with customers, no matter if those customers have a 360 acre farm or a small 15 by 20 ft. vegetable garden. And this enthusiasm carries over to the customers who really like to shop at this store.

There is a long history behind the Sar enterprise. The Charles City store is entirely retail in its operation, but the Sars also have a large hybrid corn seed farm nearby, and they have seed corn dealers over many parts of Iowa and Minnesota.

The retail store was built more than two years ago, because the Sar brothers had ideas on how an ideal seed and fertilizer store should look. And they have come up with an excellent one.

Robert was president in 1956 of the Iowa Crop Improvement Assn. and has been active for many years in the work of this group. Conscious of the educational work which needs to be done constantly on soil conditioning, seeds, etc., Mr. Sar regularly has on display an unusually large number of folders on these subjects.

Very few customers get out of this retail store without having Robert or Allen Sar or an employe suggest they take along a few folders to read to raise better crops. "There's a wealth of valuable information in those folders," Robert Sar says, "and we want people to know about it."

The store has fertilizer for both gardeners and farmers. Farm chemicals are sold in packages, cans or in bulk. Individual customers can find merchandise here, and custom sprayer operators also come here for supplies. In addition the firm handles seeds, plants, bulbs, garden tools, power mowers and other items for use in tilling the soil and raising crops.

"The local response to our store and its products has been excellent," states Robert Sar, "and we have proved to ourselves that a neat, visual, well stocked farm supply store can be a paying proposition in the average city. We could expand our lines if we wished, but at present we do not have the room."

Robert Sar is always willing to travel about the state to give talks pertinent to raising better crops. He has made many such appearances. He also has appeared before many garden clubs, locally and elsewhere to detail methods of raising vegetables, or planning and growing flower gardens. Publicity of this type has helped make the Sars better known and is reflected in increased patronage at their store.

Last year the Sar brothers put on a Seed & Fertilizer Show at a local hall during February. They had a full day of talks, slides, movies and displays and many farm folks attended despite bad weather. The Sars showed that they were good merchants, for at this meeting they had numerous merchandise displays of the products they sell. There were also many attendance prizes for those coming to the meeting.

"We really went overboard on this show, but we felt that it was very much worthwhile," says Robert Sar, "and we also plan to make it an annual event. The total cost was about $400 to us, but we asked for no supplier help. If a dealer would put on such a one day show, with supplier help, the net cost to him would be much lower, I am sure. But farmers like to attend winter and early spring shows. That is the time to reach them with the seed and fertilizer story. It's hard to get time to talk to them when they are on the fields, busy with spring work."

Another way in which the Sars publicize their store and their hybrid seed corn is via advertising in a two state farm paper, and on radio spots. Some TV advertising has been tried,

(Continued on page 23)

Illinois Farmers Only Half Way to Top Corn Yields

URBANA, ILL.—Illinois farmers have made only a little more than half as much progress in boosting corn yields with soil treatments as they could make. A. L. Lang, University of Illinois agronomist, backs up this statement with 1956 yield figures from 2,239 corn plots on the 23 soil experiment fields over the state.

Mr. Lang points out that corn yields on all untreated soil plots averaged 27 bu. an acre in 1956. On the plots where the best soil treatments were applied, yields averaged 97 bu. an acre. The average corn yield for all Illinois farms last year was 68 bu. an acre.

Farmers did average 41 bushels more corn an acre by using soil treatments than they might have if they had used no treatment at all. But if all farmers had followed the best balanced fertility program that we know how to use, Mr. Lang says they would have been able to average another 29 bu. an acre.

If this extra yield had been obtained on all of the 8.8 million acres harvested in Illinois in 1956, it would have added more than 257 million bushels to the crop. At $1.25 bu., farmers would have had $322 million more income from corn.

On the dark soils untreated plots averaged 46 bu. an acre, while those with full treatment made 108 bu. On the light soils, the untreated plots averaged 11 bu. while the full-treatment plots made 92 bu.

Illinois farmers have made real progress in maintaining and increasing crop yields by following the lessons learned from the soil experiment fields, Mr. Lang points out. But he likes to cite the yield records of the plots where the best balanced fertility program was practiced. It shows room to boost our crop yields.

The 23 soil experiment fields are part of the research and extension program of the University of Illinois College of Agriculture. Located to give a cross section of all types of soil in the state, they are showing how farmers can get top yields from their land year after year.

Nebraska Sales Cost Per Ton of Fertilizer $9.62

LINCOLN, NEB.—A series of three dealer meetings, sponsored by the Nebraska Fertilizer Institute, Inc., had a total attendance of 175 fertilizer dealers who were told that the average cost of doing business in Nebraska for the average retailer totals $9.62 per ton (see the "Over the Counter" department in this issue).

The cost figure, a finding of the Nebraska Fertilizer Institute, was reported by James Kenner, past president of the Nebraska Bankers Assn., who spoke on the topic, "What It Takes to Become a Fertilizer Dealer."

Mark Weldon and Dr. Leon Chesnin of the soils department, college of agriculture, University of Nebraska, jointly discussed "Diagnostic Inspection of Plants for Trace Element Deficiencies." The main elements named were iron, zinc, boron, copper and manganese. Dr. Chesnin cautioned the manufacturers of these trace elements that they should include on the bag the instructions for their use and not to apply an amount that may be toxic to the growing plant. He further stated that the future may bring about a wide use of trace elements provided that they were used and applied correctly at the present time.

R. W. Allstetter, vice president, National Plant Food Institute, spoke on "Fertilizer Economics." He pointed out that too few fertilizer dealers ever take the time to give their fertilizer program the economic analysis that it deserves, especially if it is in conjunction with some other phase of their business. Mr. Allstetter further stated that dealers should advise the grower that a small increase in the yield means a large economic gain.

In addition to the series of three meetings, a conference was held in Kearney, Neb., sponsored by the Kearney fertilizer dealers and the institute for farmers in that area. Nearly 250 farmers attended and, with the exception of Mr. Kenner and Dr. Chesnin, the above mentioned speakers spoke on the same subjects.

GREETING THE NEWCOMERS

A Welcoming Plan Can Turn New Residents Into Customers

In the trade area of every farm supply dealer, there are some new farmers moving in every year, as other farmers retire, move away or die. Because of this constant change in population, the alert dealer needs to be quick to know where the new families are located and quick to make the acquaintance of such farmers and welcome them to the community.

If the dealer does not have the time to visit such new farmers personally, then he can send them a welcoming letter. In any event it is a matter which should not be let slide, even for a day, because some competitor may get ahead of you, and get this new farmer's fertilizer, insecticide and other farm supply business.

While farm supply dealers have made a great improvement in the efficiency and effectiveness of their merchandising ideas in the past decade, they are still not up to par with other retailers when it comes to welcoming newcomers in the area. This is one department of a dealer's merchandising program which can stand considerable bolstering. Always remember, a good welcoming program can be highly profitable. By getting to a newcomer first and gaining his friendship and confidence you stand to gain $500 to $2,000 in extra volume annually, depending upon the purchasing power of that newcomer. So it is worth the effort.

In many areas of the country, it is true, merchants have the advantage of welcoming services conducted by

(Continued on page 15)

GREETING NEWCOMERS

(Continued from page 14)

ople trained in that department. In ent years, these welcoming bu- us have extended their activities rural areas, visiting new farmers well as town and city residents. fact, there are so many of these lcoming bureaus today, that the aler who wishes to handle the prob- n in that manner will have little ficulty making the proper arrange- nts.

You can do this job yourself, it is rue. But, because the average rm supply dealer is continually usy with more than one manage- ent task, he is often likely to slip on maintaining this welcoming rvice. That is why some dealers el they would rather have a pro- ssional company do the job, and o it right and continue it on time.

However, even if the dealer sub- ribes to such welcoming service, ere are points in the welcoming ogram where he can add his own rsonal touch, and he can institute follow-up system to make the pro- am more effective.

Here is the program followed by e retailer who uses a professional lcoming service: He has subscribed such a service for eight years and es it very much. He reports it has lped him gain many new customers omptly and increased his business er the years by thousands of dol- rs.

The cost? This bureau turns over him the names of about 20 new- mer families per month, and for is it receives 75¢ per newcomer om the retailer. The retailer has ade up his own card which the stess fills out and gives to the new- mer in the trade area. The copy llows:

"This card will introduce you to e Jones Store . . . where you will d quality merchandise, reasonable ices and excellent service.

"We invite (name of newcomer) to me in and get acquainted and pre- nt this card for a useful free gift. e deliver free of charge, and you'll d it easy to shop with our charge count service . . . Just phone us ytime . . ."

The farm supply dealer can make his own card and give it to the lcoming hostess who visits the wcomers. She will be glad to use e cards you give her. So make them iendly, good will building and sales oducing cards.

You will find that when you offer the newcomer a gift, he will come in and get it. That is your chance to meet him and talk with him. You may even sell him some fertilizer or other farm supplies. It costs you about 75¢ a newcomer, plus the gift to get him to come to you. That may be a small price to pay for getting a new account.

The retailer with the plan above ends out a letter after two weeks to hose who have not brought in the ards which the welcoming hostess ave them at the time of her visit. his letter says:

"Watching . . . waiting . . . won- ering . . . That's us . . . Watching he front door . . . waiting to see ou come through it . . . and won- ering why you haven't! You'll re- member that the welcome hostess ho greeted you on our behalf, left courtesy card with you which is deemable at our store for a wel- oming gift. We're sorry that as yet ou haven't had the opportunity of resenting this card, but we hope at when you have time, you will op in so we may meet you and so ou may become acquainted with our any services that will make your opping at this store convenient and leasant."

The retailer who uses this letter ys that it does bring in those new- mers who had been hesitant about coming in. So that extra letter pays. You can send one out, too, if you wish to follow up on a welcoming service.

After newcomers have come to the store and secured their gifts, then the retailer sends them this letter after a week.

"We're curious . . . Yes . . . disregarding that old expression about 'curiosity killing the cat.'

"Thank you for your visit . . . meeting you was a pleasure. Now we are curious to know if you like us. Won't you please take a moment to fill in the enclosed card so we may know just what you thought of us on your first visit? Remember, we are always ready with an especially warm greeting for our welcome service friend and hope that you will drop in and see us whenever you need anything in our line . . . We hope, too, that you will make use of our free delivery service, charge account service, and lay-away plan, services especially designed to make your shopping at our store convenient and pleasant.

Cordially,
J. M. Jones, President
Jones Store."

The card which accompanies this letter states:

"In order to serve you better, we will appreciate it if you will fill in this card and mail to us.

"Were you served promptly? ....
"Were you served intelligently? ...
"Did you find what you wanted? ....
"Would you like to avail yourself of our charge account service? ....
"Remarks .....
Name..... Address.....
Phone ....."

Do you welcome newcomers to your trade area as thoroughly as this, and in as friendly a manner? If you don't, then it means that you are missing a merchandising bet which can bring you more business. The wise farm supply dealer will not be too busy to work out a systematic, friendly welcoming service to newcomers.

Maine Appointment

AUGUSTA, MAINE—E. L. Newdick, Maine agriculture commissioner, has announced the appointment of Paul J. Eastman of Hallowell, as head of the department's Division of Plant Industry. Mr. Eastman had been assistant head of the Plant Industry Division since 1949.

SOIL TESTS

FARGO, N.D. — North Dakota farmers submitted 2,877 soil samples to the North Dakota Agricultural College soil testing laboratory in fiscal 1955-56. Of these, 53% were rated very low, 21% low, 16% medium and 10% high in their capacity to furnish phosphorus to crops.

Detective Suggests Do's, Don'ts for Convention Goers

CINCINNATI—"When you attend conventions, the sharpies will get you unless you observe some common sense rules of conduct."

This was the warning 40 members and guests of the Cincinnati Feed Club heard at a monthly dinner meeting in the Cincinnati Club. The speaker was Flora J. Niswonger, Cincinnati police department detective, who covers the local hotel beat. Some of his suggestions were:

Don't carry a large amount of cash or wear expensive jewelry, and don't drink or gamble with strangers—even though they're wearing convention badges.

Never wear your convention badge when away from the convention hotel. This identifies you as a conventioneer, and is an invitation for the sharpies to close in on you with any one or more of scores of flim-flam rackets. When you're on the street, carry your badge in a coat pocket. Never leave it in your room, where it can be stolen and used to advantage by a sharpie.

When you're walking down a hotel hallway and see a crap game underway in a bedroom, keep on walking. Even though every one in the game is wearing a convention badge, it's a good bet some of them are professionals and they'll take your bankroll. They're so adept they can beat your ears off with honest dice, but they'll do it even more easily with the crooked dice they always have available. Using crooked dice, Detective Niswonger demonstrated how these are used by professionals.

When going out for an evening's fun, don't ask a hotel bellboy or a cab driver where to go. They're pretty likely to steer you to a "clip" joint. And when visiting night clubs, beware of places with dim lights. In these, unpleasant things can happen to you and they frequently do.

Most men carry their wallets in the lefthand trousers pocket, where it is easy for pickpockets to reach them. If the wallet is carried in the right-hand trousers pocket, it's much less likely to be stolen, because there are very few lefthanded pickpockets.

"Scalped Field" Produces Bumper Corn Yield

EAST LANSING, MICH.—A Michigan agronomist reports that a "scalped" field, stripped of its topsoil, yielded 75 to 80 bu. corn per acre, when fertilizer and other good soil management methods were used in four-year tests.

Dr. J. F. Davis, of Michigan State University says that this scalped field produced only 25 bu. of corn per acre before the soil-building program was begun. The renovation job, he says, was accompanied by a rotation of corn, oats, alfalfa, alfalfa; or with a green manuring and stable manure program. Mr. Davis reports that adequate amounts of fertilizer were used in the tests.

By RAYMOND ROSSON
County Agent, Washington County, Tenn.

Farming is a highly competiti business, and without skill and go management, security on a farm an illusion. Education is no gua antee of success in farming. Its i portance is often underemphasiz by those who do not have it, a overemphasized by those who do.

Farming is steadily becomi more of a complex science. T successful farmer has to be abrea of that which is new and better crop and livestock production; has to be willing to accept ne ideas. Education helps him ma these adjustments and on the ave age make the most money.

Experience is definitely neede and education is not a substitu for it. Getting farm experien takes time; it's a growth... readi a book will never teach a pers how to milk a cow, but a good bu letin on feeding cows will be great help.

The trouble with experience i one farmer just doesn't get enoug of it. If he could spend ten o more years visiting hundreds o good farmers, as well as severa experiment stations, finding ou from them direct, what succeed and what fails—well that woul be experience.

Environment means much. farmer's neighbors should be go farmers. A farmer should not pi a community where its leaders fig progress. Tradition can be t enemy of progress. Changes a coming and coming fast and a farmers should be willing to me them. The same thing applies to towns, just as it applies to the cou try.

A farmer must be in position compete, because there are six mi lion other farmers in the U.S. Far ers just can't buy cars, bath tub refrigerators, electric stoves, goo clothes, furniture, build goo churches, nor support good schoo and roads with poor yields.

Nebraska Corn Borer Damage Estimated At Over $5 Million

LINCOLN, NEB.—Corn bore damage in Nebraska during 1956 estimated at well over $5,000,00 Lloyd Andersen, University of N braska assistant Extension entomol gist, reports.

A European corn borer survey r cently completed by Mr. Anders shows a total loss of 3,396,541 b over the state. The greatest dama was suffered in irrigated corn of t central counties, and caused by t second generation borers.

"The loss in central Nebraska w a result of increased use of irrigati in that section," Mr. Andersen state "The least infestation was found the southeast counties.

"In our survey we made five sto per county checking 25 corn stal at each stop. From this we figur the borers per 100 plants and th calculated the per cent loss. Doll value is figured at $1.50 bu."

Although borer infestation has d clined sharply in southeast Nebras and other sections, it is still a ve serious pest, he added.

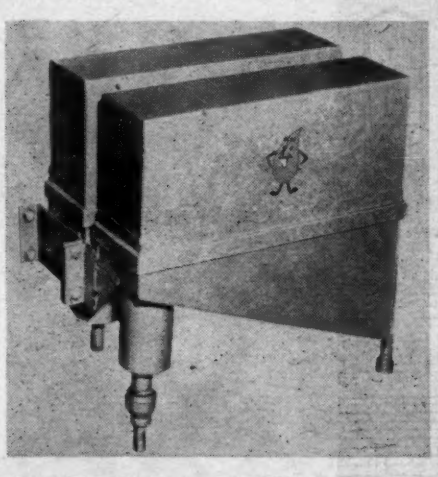
What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

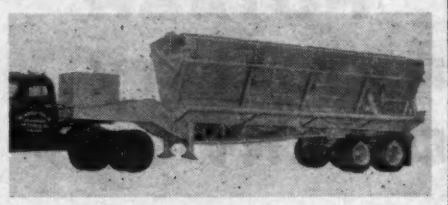
No. 5650—Seed Treater Attachment

Two different seed treating chemicals may now be applied simultaneously through use of the dual reservoir attachment recently announced by Panogen, Inc. The attachment for seed treaters was developed so that two physically incompatible materials could be applied at the same time without mixing before they reach the seed, state company officials. They continue: "This, for example, permits the seed processor to apply Drinox, the liquid insecticide, and Panogen liquid seed disinfectant with a single trip through the treating equipment. Another feature is that one reservoir may be used to hold a chemical such as Panoram, Arasan, Spergon and Captan for slurry treatment of corn or beans while the other holds a liquid fungicide such as Panogen for treatment of small grain. The operator can switch from one tank to the other almost instantly without losing time for cleaning and change-over." For further information check No. 5650 on the coupon and mail it to this publication.



No. 5648—Side-Dump Body

A side-dump transport, manufactured by the Baughman Manufacturing Co., unloads from individual buckets into truck-mounted bodies, and can be used for other big, heavy-duty bulk transport assignments. The buckets can be raised or lowered by means of hydraulic rams, which are mounted on a monorail and moved into unloading position by means of a winch arrangement. The buckets are available with or without lids. The lids fold out during discharge to form a discharge chute. The company also manufactures a self-supporting hopper-type bottom dump utilizing gravity discharge and a hopper-type auger unloader body. Sliding gates in the body bottom control the discharge flow material in the



gravity discharge system. In the hopper-type auger unloader body, a divided auger in the bottom carries the material to the center-of-body vertical discharge auger. Secure more complete details by checking No. 5648 on the coupon and mailing it to this publication.

No. 6544—Methallyl Chloride

Methallyl chloride (3-chloro-2-methyl-1-propene) is now commercially available as a new product of Food Machinery & Chemical Corp.'s recently formed FMC Organic Chemicals Division. Methallyl chloride will be found of interest for synthesis of monomers, insecticides, fungicides, fumigants and pharmaceuticals as well as for general use as an organic intermediate, according to company spokesmen. Literature on this subject is available without charge. Check No. 6544 on the coupon and mail it to Croplife.

No. 6542—Applicator Kit

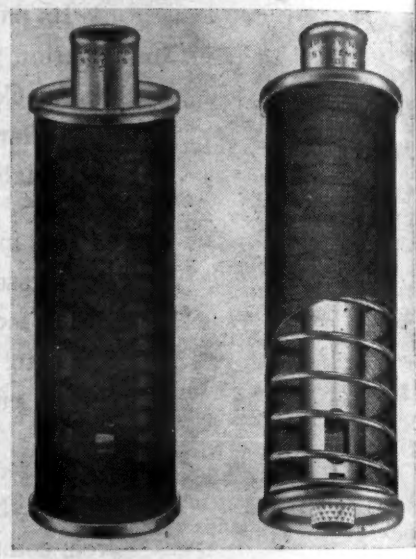
Details of an applicator for water soluble fertilizers and other emulsifiable chemicals are announced by the Manco Chemical Co. The applicator is composed of a complete kit that includes a syphon-principle applicator, applicator hose and spray nozzle. Company officials state that the unit is "inexpensively made of polyethylene with a standard thread, attaches to the end of a garden hose and mixes tap water with concentrates in a gallon jug, bucket or other container." The nozzle has a wide opening to permit the free flow of solution regardless of varying water pressure. A sample kit will be forwarded on request. Check No. 6542 on the coupon and mail it to Croplife.

No. 6540—Plant Growth Stimulant

The availability of the new plant growth stimulant, gibberellic acid, is announced by S. B. Penick & Co. Company officials state that initial work indicates that on certain flowers and ornamentals, gibberellic acid will stimulate stem length and lateral growth, accelerate stem growth on cuttings, increase profusion of blooms, stimulate earlier blooming, promote flowering of plants tending to remain in the vegetative stage and induce flowering of biennials in the first year. Gibberellic acid was isolated by Japanese scientists working on the prevention of a rice disease. Further work by U.S. agricultural scientists indicated that "in only three to four weeks plants treated with the chemical grew three times as tall as comparable untreated plants," the company announcement stated. Further information about gibberellic acid may be obtained by checking No. 6540 on the coupon and mailing it to Croplife.

No. 6539—Suction Strainer

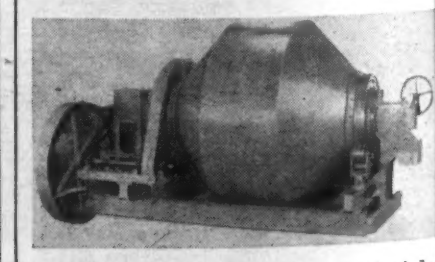
The Spraying Systems Co. has announced a new, low cost suction strainer for use in spray rig tanks. The strainer is made with either aluminum with a Monel screen or of stainless steel with a stainless steel screen. Practically all farm chemicals may now be handled, including the balanced mixed fertilizers containing phosphoric acid, it is claimed. Fifty and 100 mesh sizes are offered. A hose shank connection is supplied to



fit either ⅝ in. OD or ¾ in. OD rubber hose. The hose is slipped over the strainer hose shank and held with a hose clamp. No special fittings are needed. The strainer is easily disassembled for cleaning by turning a knurled screw in the strainer bottom, which releases all parts. It is claimed that the new No. 7130 suction strainer will fit through the opening of any standard container and permits withdrawal of solution to within 1 in. of the bottom. Secure complete details by checking No. 6539 on the coupon and mailing it to Croplife.

No. 6541—Rotary Mixer

The Munson Mill Machinery Co. has announced new features of its rotary mixer used for the production of various fertilizers, insecticides and herbicides. Among the features claimed are: The mixer will blend powders and granules; it will not break up granular clays; spray pipes have been installed in the mixer to spray liquids



on the dust or granular materials; the mixers are equipped with an internal vent pipe to expel toxic fumes; they are dust tight; the mixer drum may be heated and will transfer heat rapidly to the materials to be blended; a stream of cold air for cooling can be introduced into the mixers; they can be used to coat granular fertilizers with insecticide dusts; they

Send me information on the items marked:

☐ No. 5643—Catalog	☐ No. 6537—Film
☐ No. 5644—Container	☐ No. 6538—Safety Folder
☐ No. 5648—Side-Dump Body	☐ No. 6539—Suction Strainer
☐ No. 5645—Attachment	☐ No. 6540—Growth Stimulant
☐ No. 5650—Seed Treating	☐ No. 6541—Rotary Mixer
☐ No. 6532—Bulletin	☐ No. 6542—Applicator Kit
☐ No. 6536—Pesticide	☐ No. 6544—Methallyl Chloride

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COMPANY .....

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Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

will blend various chemical components into a homogeneous, accurate mixture in a short period of time with no breakage in the particle size; the mixers are available from 20 to 250 cu. ft. mixing capacity. Pictured is style No. 7 Munson rotary batch mixer (gravity intake and gravity discharge). Secure full details by checking No. 6541 on the coupon and mailing it to Croplife.

No. 5645—Blower Attachment

A new attachment for Ace portable electric blowers is designated as Fan-

gard attachment No. 226, announces the Ace Co. Used in connection with other available suction attachments the unit converts the blowers into limited capacity tank type industrial vacuum cleaners. Nuts, screws, washers and scrap can be picked up safely without danger of damaging the fan or fan housing, it is claimed. "The complete portability of this type unit is important where cleaning is done from ladders, in elevator shafts or other places impossible to reach with conventional tank type industrial vacuum cleaners," say company officials. A catalog is available without charge. Check No. 5645 on the coupon and mail it to this publication.

No. 6537—Apple Mildew Film

Apple mildew is the theme of a new, educational 16 mm sound motion picture, in color, produced by the department of plant pathology of Cornell University in cooperation with the Rohm & Haas Co. The film, which runs about 15 minutes, depicts the damage caused by powdery mildew and the geographical distribution and climate factors involved. The life cycle of the disease is shown in detail, considerable footage being devoted to photomicrography of infected buds and the conidial and perithecial stages. The importance of thorough and timely spraying for effective control is shown and the film suggests to apple growers that they consult their local extension service representatives or state experiment station for detailed recommendations. The film is intended to be of particular interest to fruit growers, pesticide dealers, gardeners, county agents, vocational agriculture teachers and students. The film is suitable for television presentation and for showing at meetings sponsored by public agencies. Secure complete information by checking No. 6537 on the coupon and mailing it to Croplife.

No. 5644—Bulk Materials Container

A new self-palletized and expendable bulk materials container called the T-Pack has been introduced by the Titan Pallet Co. Internally supported, the T-Pack includes a lid which can be strapped or taped for security (see photograph). It is designed to accommodate up to a ton,

(Continued on page 27)

• MORE TONS per man hour

DIGS MORE

The new-model HA "PAYLOADER" is especially designed for fast, low-cost materials handling — indoors and outdoors. Rear-wheel-steer and compact design makes it easy to maneuver in close quarters. The distinctive bucket action with powerful, 40° break-out and tip-back at ground level digs heaping loads quickly.

CARRIES MORE

Heaped loads are cradled close and low for greater stability while carrying. Hydraulic system load-shock-absorber cushions the load, smooths the ride and permits faster movement with less spillage and greater safety. Torque converter drive makes for smooth, fast starts, quick maneuvering and easier control.

DELIVERS MORE

It's the tonnage delivered per hour that counts. Since you get MORE load to begin with, and keep MORE while traveling at higher speeds . . . with less spillage in both instances . . . the result is you *deliver* more tons per load and more loads per man-hour, hour after hour and day after day.

Better Engineered for Better Performance

Shortest Turning Radius — The model HA can work where others can't because it has a shorter turning radius than any comparable tractor-shovel — goes through doorways and spaces less than 4½ feet wide — easily turns corners of 6 foot aisles.

Higher Dumping Height — The model HA can deliver its loads over bin and hopper edges up to 6½ feet high. Loads can be dumped as fast or slow as desired at any height.

Biggest Capacity — With a bucket capacity of 18 cubic feet payload, and 14 cubic feet struck, the model HA has a carrying capacity up to 25 percent greater than comparative machines—and more than some bigger, heavier machines.

Easiest Operating — The entire hydraulic control of the model HA bucket — tip-back, raise, dump and lower — is handled by a single conveniently located lever. It's the simplest, easiest bucket control available.

WANT PROOF? If you are using a "PAYLOADER" that is more than 2 years old, ask your "PAYLOADER" distributor for a demonstration of the latest model, and see how much more work your operator can turn out—and how much more than with any other comparable size machine. Call him today.

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- ☐ Front-wheel-drive models HA (18 cu. ft.) and HAH (1 cu. yd.)
- ☐ Larger models (including 4-wheel drives up to 2¼ cu. yd.)

Name _____

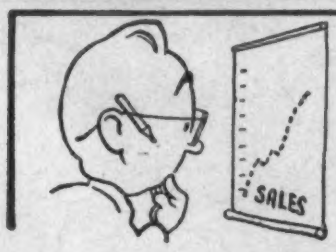
Title _____

Company _____

Street _____

City _____ State _____

43



Doing Business With

Oscar & Pat

By AL P. NELSON
Croplife Special Writer

Henry Buckhardt, a burly, barrel chested farmer, who wore a grey checkered shirt, a battered felt hat cocked to the side of his head, and who sported a two day growth of beard, entered the salesroom and office area of Schoenfeld & McGillicuddy, farm supplies, and approached the railed-in area where Oscar Schoenfelt sat figuring.

"Hi, Oscar, old boy!" he greeted in a voice loud enough to cause Tillie Mason, the ulcerish-inclined bookkeeper, to wince. "How are things around this joint?"

"Things are not so good!" Oscar retorted.

"For once, I agree with you," said Henry Buckhardt, s c r a t c h i n g a paunch under his grey shirt tucked into grey corduroys. "The world is going to hell!"

Oscar sat still for a second, then swung slowly around and gazed at Buckhardt, saw his grim, stony face. It was so unusual for Oscar to find someone who agreed with his dire views of the world that it always evoked surprise in him.

"The cost of runnin' a farm is goin' up every day," said Buckhardt, "and the prices of things a farmer sells is not risin' fast. Taxes is goin' up all the time, hired men want more money, our government is pourin' money everyplace else in the world and not enough at home."

Oscar dared to smile a little. "Ach, I am glad you say that, Henry. It is time for a change in lots of places."

The farmer n o d d e d agreement. "That's right, Oscar." He reached into his pocket and pulled forth a small booklet. "I brought this along for you. I got it in the mail the other day."

Oscar regarded him suspiciously. "What does it say?"

"What does it say?" echoed the farmer. "Why it tells all about the booms and depressions in this country since 1775. And, by heck, the writer says we are gonna have another depression soon, sure as shootin'. It's the law of averages, and when it comes it will be a dandy."

"Ach, let me see that," Oscar said eagerly, reaching for the document of gloom. "I would like to show it to Pat. Maybe then he will start to cut down on his spending. Maybe this book will make him change his tune, and—"

The talk went on this way for about ten minutes, with Oscar getting constantly more excited about how he would confront Pat with this booklet and say, "See! See! Just as I have been telling you. One of these days it will be over—all kapoot. And where will we be with too much stock on the shelves, and with lots of money on the books and nobody can pay? And with only a few dollars in the bank? Ach, du lieber."

Henry Buckhardt seemed to enjoy seeing Oscar get angry. Then he leaned forward a little, and said, "Oscar, with things so bad every place and due to get worse, how about givin' me an extra 5 or 8% discount on my lime and fertilizer? I've been thinkin' I wouldn't use any this year, 'count of bad times, but if you fellas could make me a real low price, then maybe I would buy."

A cold chill settled over Oscar's ire-ridden heart. Slowly he began to realize the trap into which he had been drawn by the calculating farmer.

"A b—big discount?" he ejaculated. "Ach, we can't do that. We are in business to make a profit." His discomfiture was the greater because tall, blue eyed Pat McGillicuddy, his partner, had come in and was listening, while removing his coat and hat.

"You gotta forget about profit in these bad times!" taunted Buckhardt. "You don't wanna make profit when the farmer ain't makin' nuthin', do you? If I were in your place, I would sell everything I had in stock, just to get my money back. And you talk about profit. Would you like to get stuck with all this stock in your warehouse?"

Oscar's face was now in a state of deep purple. Mortification, a n g e r, frustration—all these throbbed from his distended veins. "M—maybe the country is kapoot," he cried, "but we can last if—if Pat gets out and collects. We are not going to sell at no profit . . ."

"But you agreed with me that the country is going to hell," persisted the farmer stubbornly, "and that people had to cut down. When the shoe fits, why don't you wear it?" His look was very challenging.

"I can't agree with either of you fellows," Pat said, stepping forward. "The country is not going to hell. This country, with all its resources, is only what people make of it."

"Yeah," said the farmer. "Take a look at this, then." He grabbed the depression and boom booklet off Oscar's desk and shoved it at Pat. "Here's facts. You can't deny them."

Pat glanced through the booklet, studied a chart, and then smiled. "Reminds me of a joke I heard once, begorra," he said. "A fellow said that since every man knew he was going to die sometime why didn't he just lay down and die when he was born. Why go on living at all in the first place?"

"Ach," said O s c a r disgustedly, "what stuff."

"This booklet tells about depressions and booms since 1775," said Pat. "Sure, we got 'em, coming and going. But the country has grown through all of them. Not even George Washington could have d r e a m e d we'd have the prosperity we got today."

"But it won't last!" almost shrieked Oscar.

"Oh, we'll have our ups and downs," Pat said. "But so long as people are not paralyzed with fear, so long as they let their guts show a little in what they do, so long as they get out and work, most of the troubles are going to be solved."

"I still want a cut in price on my lime and fertilizer," Buckhardt said stubbornly, "or I don't buy any this year."

"You will be the loser, Hank," said Pat soberly. "You have built your soil steadily the last five years, and got some wonderful corn and other yields. If you don't lime and fertilizer this year, the loss of your business won't exactly break us, but you will have a much smaller crop I think. So you will lose."

Buckhardt pursed his lips. "Well, I sort of hate to get a smaller crop. I've been workin' hard to build that soil. My wife is braggin' to all the neighbors how our corn yield has gone up the last few years. But, lime and fertilizer cost too much, Pat."

"So does everything else," Pat said gently. "You are no different from anyone else. Everything we buy we think is too high priced. We even thought that in depression years. It's human to kick. But you aren't starvin', Hank. And you are ridin' in a new Buick you bought last Fall. Oscar and I are drivin' old cars. Neither of us has had a new one in five years."

"Mine is twelve years old," Oscar corrected proudly.

"Oh, you guys are welchers," Buckhardt said, with a trace of gruffness. "Since I can't chisel you down on price, I'll give you an order for half the fertilizer I bought last year. You'll have to come out and really sell me the rest of my requirements."

"Okay," said Pat. "Half a loaf is better than none. And I'll be out within a week to try to sell you that other half loaf."

SUGGESTED MINIMUM FERTILIZER GRADE NEEDS OF THE MIDWEST STATES

RATIO	ILL	IND	IOWA	KAN	KY	MICH	MINN	MO	NEBR	N.D.	OHIO	S.D.	WISC
0:1:3	0-10-30	0-10-30	0-10-30			0-10-30	0-10-30	0-10-30			0-10-30		0-10-30
0:1:2	0-10-20	0-10-20			0-10-20	0-10-20							
0:1:1	0-20-20	0-20-20	0-20-20	0-20-20	0-20-20	0-20-20	0-20-20	0-20-20			0-20-20		0-20-20
0:2:1	0-20-10	0-20-10	0-20-10		0-16-8	0-20-10	0-20-10			0-20-10	0-20-10		0-20-10
1:6:3						4-24-12		4-24-12		4-24-12			
1:4:4	4-16-16	4-16-16	5-20-20	5-20-20	3-12-12	4-16-16	5-20-20	5-20-20	5-20-20		4-16-16		5-20-20
1:4:2	5-20-10	5-20-10	5-20-10			5-20-10	5-20-10				4-16-8		5-20-10
1:3:9	3-9-27	3-9-27				3-9-27		3-9-27					3-9-27
1:3:6		3-9-18									3-9-18		
1:3:2					4-12-8								
1:3:1								8-24-8					
1:2:4			5-10-20			5-10-20	5-10-20						5-10-20
1:2:3		5-10-15			5-10-15						5-10-15		
1:2:2		8-16-16	8-16-16		5-10-10	8-16-16	8-16-16	8-16-16			6-12-12		8-16-16
1:2:1			10-20-10	10-20-10		10-20-10	10-20-10	12-24-12	10-20-10	10-20-10		10-20-10	
1:1:3					6-6-18								
1:1:1	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10		10-10-10	10-10-10		10-10-10
1:8:0		5-40-0											
1:4:0	8-32-0	8-32-0	8-32-0		8-32-0	8-32-0	8-32-0	8-32-0	8-32-0	8-32-0	8-32-0	8-32-0	
1:2:0	10-20-0		10-20-0		10-20-0	10-20-0	10-20-0	10-20-0	10-20-0	10-20-0		10-20-0	
1:1:0	15-15-0		15-15-0	15-15-0			15-15-0		15-15-0	15-15-0		15-15-0	
2:12						20-10-20							
2:11		14-7-7				12-6-6					14-7-7		
2:21						12-12-6				12-12-6			

* The production of higher grades of the suggested ratios is encouraged. Solutions of similar ratios are acceptable.

The following changes in grades and ratios have been suggested for future consideration:

changes 1-3-6 (3-9-18) to 1-2-4 (5-10-20)
0-1-3 (0-10-30) to 0-1-4 (0-10-40)
1-3-9 (3-9-27) to 1-2-8 (4-8-32)
1-2-3 (5-10-15) to 1-2-4 (5-10-20)

FERTILIZER RECOMMENDATIONS FOR MIDWEST—Agronomist at the Middle West Soil Improvement Committee meeting in Chicago Feb. 14-15 presented recommendations for minimum fertilizer grade needs of the thirteen midwestern states covered in the MWSIC operations. The agronomists indicated that solutions of similar ratios are acceptable, and that changes for higher analyses of materials will be suggested for future consideration. At the left in the above chart are listed the ratios of nitrogen, phosphate and potash, and across the chart are the grades listed by states. The most consistent ratio for the 13 states is 1:4:4, in grades 4-16-16, 5-20-20, and 8-12-12.

RINGING THE CASH REGISTER

1957 Looks Promising

What are prospects for agricultural type sales to farmers in 1957? Judging from a survey made by one farm publication in which 3,956 retail dealers in north central U.S. participated, 1957 business will be good. In answer to the question, "Do you expect your 1957 sales to farm families to be better than, or the same as 1956?" 86% of the hardware dealers said yes; 84% of the lumber dealers said yes; 85% of the furniture dealers yes; 84% of the appliance dealers yes; 85% of the automobile dealers yes; 84% of the motor truck dealers yes; and 73% of the farm implement dealers yes.

His Best Promotion

Jim Volk, manager of the Farmers Exchange, Waverly, Iowa, says that his best sales promotion event of the year is a Spring Fertilizer and Seed Day. The promotion increases his feed sales, too, and brings in a lot of new customers every year. There is nothing high-powered about the event, Mr. Volk says, but farmers have become acquainted with the annual event and like to return every spring.

Extra Costs Claimed

An opponent of trading stamps claims that nine times out of 10 the merchant can't absorb the extra costs of a stamp plan without raising prices or dropping other promotions. Chances of coming out with a lower net profit are 50-50. The U.S. Department of Agriculture reports that in one survey it was found that less than 10% of the stores using stamps could absorb the cost without raising prices or reducing other promotions. Twelve percent could not offset the added cost by any method. Net earnings of about half the stores using stamps dropped and 20% remained stable. The USDA survey showed, however, that trade stamps appear to benefit the larger stores. The survey was made in the food field.

Back Your Club

Community clubs in rural areas pay off in better schools, better roads, better recreation and often there is dollar-and-cents evidence of benefits to both rural and urban people. Dealers should give such community clubs their moral if not financial backing. A recent study in several southern states indicates that a community which is well organized usually has higher buying power, has better crops, increases its livestock numbers, uses more fertilizer and has more modern conveniences.

IOWA FIRM

(Continued from page 14)

but to date the returns do not warrant the cost, says Robert Sar.

The Sars are steadily plugging the idea of having soils tested. They constantly urge farmers to send soil samples to the Iowa State College Soil Testing Laboratories at Ames.

Quite a few farmers, especially the large corn farmers, are testing their soils regularly. Due to high corn yields per acre, no efficient farmer can afford not to have his soils tested regularly, says Robert Sar.

He points out that the Iowa Bankers Assn. distributes a special soil testing folder urging farmers to have soils tested. The folder details steps on "how to take a soil sample." Folders like this, due to wide distribution, are having a good effect on the general farm population, says Robert Sar. Bankers and other businessmen can work together to help farmers get their soils in the proper condition for planting, cultivating and harvesting highly profitably crops, the Sars say. It is a job which requires constant effort, constant cooperation.

Oregon Sales Hit Record in 1956

PORTLAND, ORE.—Oregon farmers used more fertilizers in 1956 than in any recorded year. Reports to the state department of agriculture show 183,018 tons or 45,600 tons more than in 1955. Lime sales, lower in 1956 than in the 1952 season, reached a second highest level of 53,774 tons.

Inspection fee reports show a record usage of agricultural minerals with 28,889 tons sold. This is 1,672 tons more than the prior record year, 1955. Agricultural minerals extensively used in Oregon include soil sulphur, gypsum, boron, ground rock phosphate and metallic salts.

FARM SERVICE DATA

Extension Station Reports

Nitrogen fertilizer is more effective in increasing corn yields than nitrogen supplied by growing a legume crop, according to Iowa tests.

I. J. Johnson, W. V. Bartholomew and H. A. Fribourg of Iowa State college report that 50 lb. of nitrogen fertilizer per acre increased the corn yield 30 bu. when applied as side dressing before the final cultivation. Corn yields were increased only 20 bu. per acre from 50 lb. of legume nitrogen supplied by alfalfa or red clover.

Legumes also leave the soil very dry; thus the crop following alfalfa or clover has a severe drouth handicap at the start of its growing season. Therefore, it is wise to depend upon grain crop residues plus nitrogen fertilizers in a series of drouth years. This will maintain soil fertility, structure, and tilth.

★

Use of insecticides on sugar beets can control the sugar beet root maggot and increase income, North Dakota Agricultural College Experiment Station entomologists have found. Recent NDAC trials show that insecticides sprayed on fertilizer or mechanically distributed in rows with beet seeds can control the sugar beet root maggot.

Insecticide-fertilizer mixtures used where maggots are a problem yield a high return. If sugar beets bring $13.50 per ton, an increased income ranging from $40 to $60 per acre can be expected at a cost of about $3 per acre for material.

★

An Illinois agronomist reports that deep-rooted legumes and grass crops, plus limestone and fertilizer are key weapons in the battle to keep farm topsoil in place and cut down damaging losses from erosion.

L. E. Gard, agricultural research specialist of the Dixon Springs Experiment Station, said that "the more you build up the productivity of the fields in grass and legumes, the greater will be the protection against erosion.

"Legumes and grasses are the best crops for reducing runoff and preventing soil loss because they protect the soil while they are growing and also reduce the danger of erosion when cultivated crops follow in the rotation."

Even cultivated crops will cause less erosion if they are grown on well-fertilized, well-managed soils, he said. Unfertilized fields lost 11 inches more soil during a 17-year rotation farming test than did a plot on which was added manure, limestone and fertilizer. The tests were made at Elizabethtown in Southern Illinois.

Mr. Gard reported that properly fertilized pasture land combined with moderate grazing can do a great deal to reduce erosion and increase productivity. Severe grazing can undo much of the good accomplished by fertilizing the soil.

Fertilized, moderately grazed pasture lost only about half as much water and one-third as much topsoil as did severely grazed fertilized pastures in tests at Dixon Springs, Mr. Gard said. Unfertilized plots, regardless of the severity of grazing, lost twice as much rainfall in runoff, as did the fertilized, moderately grazed plots.

★

B. A. Ackerman's corn yields now average 80 bu. per acre compared to only 35 bu. before he began using fertilizer and other good management practices 12 years ago on his farm in Benton County, Minnesota.

His oats yields now average 75 bu. per acre, compared to 30 bu. before he began building the soil's fertility level. Alfalfa hay yields now run 4½ tons per acre, compared to only 1½ tons formerly.

Mr. Ackerman says he owes a lot to Eino M. Siira, county agent, and to local Soil Conservation Service men who helped him develop his soil improvement program. The SCS service men helped him put in more than a mile of drainage ditches to carry standing water off low fields.

Mr. Ackerman's fertilizer program for corn includes a plow-down treatment of 200 lb. per acre of a mixed fertilizer such as 10-10-10 or 12-12-12. Then he adds another 160 lb. of 4-12-24 with the corn planter. After that, he sidedresses the corn with nitrogen fertilizer.

When he plows down corn stubble for grain, he puts in 200 lb. of 10-10-10 per acre, plus another 150 lb. of 4-12-24, or 5-20-20 with the grass seed. He tests his soil once in every crop rotation.

★

The rapid increase in fertilizer use by Corn Belt farmers in the past 10 years was described as "a step in the right direction," in a University of Wisconsin bulletin.

"Most farmers now use some fertilizer," says the bulletin, "but only a few use enough to make maximum advantage of the climatic potentials and the physical capabilities of their soils, with the new and improved management practices now available."

The bulletin points out that many farmers use far less fertilizer than would be most profitable at prevailing price levels for farm products.

"Even under less favorable cost and price conditions, there would be room for profitable use of as much, or perhaps more fertilizer in this region," the bulletin says.

Looking ahead, the bulletin says that the role of fertilizer in promoting higher yields through widespread adoption of maximum rates of application "is significant when future needs for food and fiber are considered."

★

New developments in fertilizer practices mean that we are going to need more lime in our soils, reports Professor Ed Longnecker, soils scientist at Michigan State University.

Mr. Longnecker says that both the increased use of fertilizers and a

hange in the character of the fertilizers themselves are making our oils more acid.

Farmers, points out Mr. Longnecker, are using heavier and heavier application of fertilizer in order to increase yields. Higher yields, however, mean greater depletion of the supplies of calcium and magnesium in the soil.

Another factor is the use of more concentrated fertilizers. For example, instead of using ordinary superphosphate, we are now using treble superphosphate, which has less than one-third as much lime in it. A study has shown that in 1920, over half of the lime applied in the United States was in fertilizers. Now fertilizers supply only one fifth.

A third factor in the increase in soil acidity is the increased use of nitrogen fertilizers. Most of these fertilizers leave an acid residue in the soil, which must eventually be neutralized.

★

Purdue University trials show that 2,4,5-T brush spray apparently had no harmful effects on turkeys which consumed forage that had been sprayed or fed mash to which the herbicide was added. Tests were conducted by Roy E. Roberts, Purdue poultry staff member, and B. J. Rogers of the Purdue department of botany and plant pathology.

Toms, averaging about 15 lb., were placed in pens on an alfalfa and bluegrass pasture which had been sprayed at the rate of 1.6 lb. of 2,4,5-T per acre. This rate of application is commonly recommended for brush control. Later the birds were placed on an area which had been sprayed three days previously to determine whether the consumption of well-wilted alfalfa would have any different effect.

In a second trial, one lot of turkeys was fed a ration which contained 10% of ground alfalfa which had been sprayed, then dried and ground. Another group received mash to which 25% of the herbicide was added.

Neither the addition of the sprayed alfalfa nor the 2,4,5-T to the mash had any appreciable effect on the rate of growth or the amount of feed consumed, the scientists reported.

★

Putting all the lime on the field before plowing is as good a method as the split application method—which is the common practice. The important thing is to mix the lime thoroughly with the soil.

University of Wisconsin soil scientists J. R. Love, A. E. Peterson and L. E. Engelbert have found that applying all the lime before plowing gives almost as good distribution in the soil as putting half the lime on before plowing and the other half after the field is plowed.

Split application is inconvenient for many farmers who have their lime spread on the field when it's brought in by truck. Putting on all the lime at once makes the truck-spreading method practical.

On one field, all the lime was put on and disked in before plowing. On another, the lime was put on and disked in after the field was plowed. On the third, the researchers used the split application.

All the fields were seeded to alfalfa in 1952. In the second year of alfalfa, the researchers made stand counts and found no difference for any of the treatments.

Total hay yields for the three years were the same for the split application method and where all the lime was applied before plowing, the researchers say. Where all the lime was put on after plowing, hay yields dropped about one-quarter ton a year.

★

Nitrogen top dressing of wheat will pay off in increased yields at harvest time. That's the word from A. R. Halvorson, Purdue University extension agronomist in charge of Indiana's "Pocket Area" wheat contest.

Mr. Halvorson has advised southwestern Indiana wheat growers who are going to try for that prize field of wheat in the contest this year to top dress the crop with nitrogen if they haven't already done so. And, farmers in other parts of the state should take steps now to make sure their wheat has or will have enough nitrogen to produce a bumper crop.

According to Mr. Halvorson and other Purdue agronomists, nitrogen should be applied in southern Indiana before March 20 and in northern Indiana before April 20.

The new wheat varieties—Knox, Dual and Vermillion—can really make high fertility levels pay dividends, he said.

On heavy textured, dark colored soils, Mr. Halvorson says up to 20 lb. of nitrogen per acre may be needed. On lighter colored soils, 30-40 lb. can be profitably used. Fifty pounds or more of nitrogen may be needed on sandy soils.

Gloomicides

The small fry, nervously trying to explain the significance of his poor grades on the report card to his disgruntled dad: "Don't forget — we're studying all new stuff this year."

★

When some husbands return from a round of golf at the country club their wives are convinced that the real hazard on the place wasn't water.

★

She: "I was a fool when I married you."

He: "Well, don't blame me. I didn't know it at the time."

★

A little boy had been pawing over the stationer's stock of greeting cards for a long time when a clerk asked him, "Can I help you find what you're looking for, son? Birthday card? Get-well card? Anniversary congratulations to your mother and dad?"

"Not exactly," said the little boy, shaking his head. Then, "You got anything in the line of blank report cards?"

★

"Jimmy," said the little fellow's mother after cleaning up his battle scars, "when that other boy threw stones at you, why didn't you come and tell me instead of throwing them back at him?"

"Oh, for Pete's sake, Mom," he replied with disgust, "what good would it do to tell you? You couldn't hit the side of a barn."

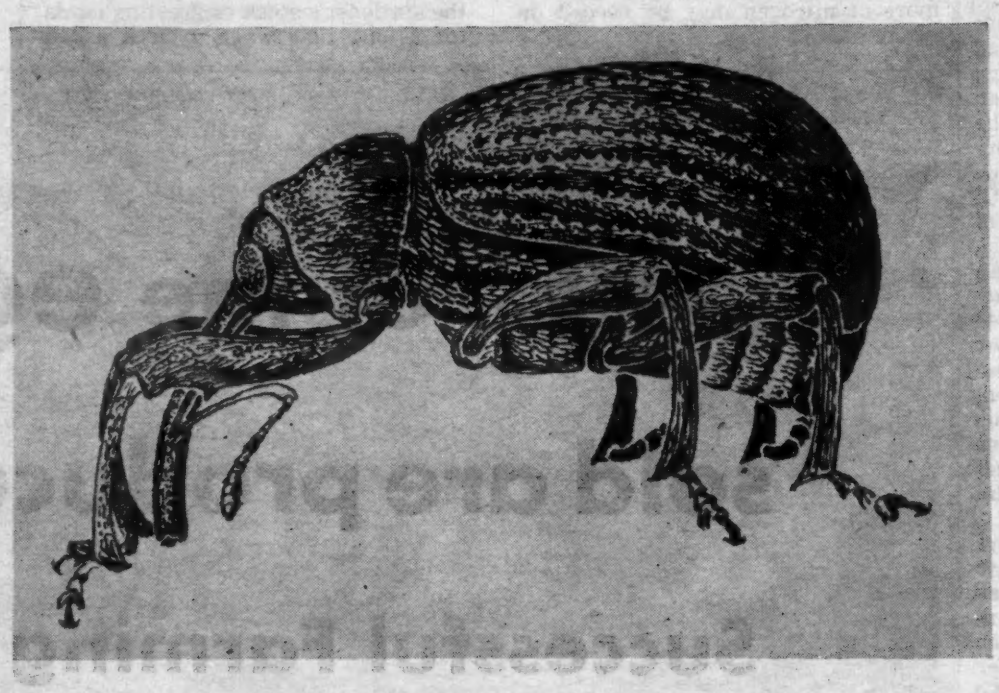
★

The youngest in the family came home from Sunday School the other day beaming with new-found knowledge. "I found out who the first two people were," she announced, "but I can't remember if it was Odd and Even or Even and Odd."

BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board

Pepper Weevil



How to Identify

The adult pepper weevil is a black snout beetle with grey or yellow markings. It is about an eighth-inch in length, with its snout accounting for about half the length of the body. In the larval stage, the bug is greyish-white with a pale brown head. Larvae are legless and are up to a quarter-inch in length.

Damage Done by Pepper Weevil

As the pest's name indicates, it does major damage to pepper plants. The adults feed on the foliage of the plants, blossom buds and tender pods. Larvae are also destructive. They feed within buds and pods, resulting in misshapen and discolored pods. Both the buds and pods frequently fall off the plant. The adult beetle lays eggs in the buds or fruits of peppers. The larvae are usually found tunneling in the seed mass in the center of the pods. This pest is found from coast to coast across the southern portion of the U.S.

Control of Pepper Weevil

Various pesticidal chemicals have been recommended for control of this pest and recommendations may be different from state to state. In view of the necessity of having residue-free edible portions of the plant, it is advisable to contact county agents or state experiment station entomologists for information concerning timing and dosages.

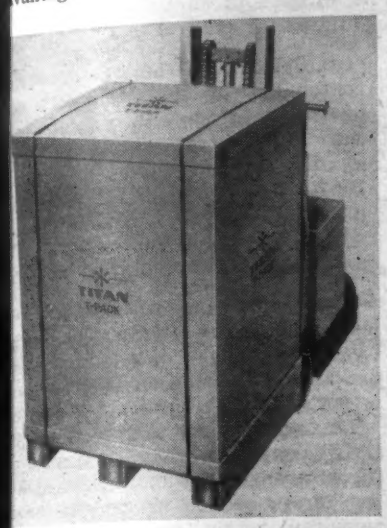
Illustration of Pepper Weevil furnished Croplife through courtesy of U.S. Department of Agriculture.

Previous "Bug of the Week" features have been reprinted in attractive 24-page booklet, priced at 25¢ single copies; reduced rates in quantities. Write Croplife Reprint Dept., Box 67, Minneapolis 1, Minn.

WHAT'S NEW

(Continued from page 19)

pending on material density, and proportioned to stow snugly in andard boxcars and trailer trucks. andard specifications are 35 in. by in. by 48 in., which can be varied particular requirements. The new it is claimed to provide all the vantages of expendability, product



rotection, economy and handling avings. Complete information on the ontainer may be had by checking o. 5644 on the coupon and mailing to this publication.

No. 6536—Pesticide

A new pesticide called Crag Brand Mylone is now being used experimentally to combat three pests that plague growers of nursery stock, tobacco, vegetables and some flowers. The three pests are weeds, nematodes, and several soil diseases. Mylone, formerly called fungicide 974, was developed by Carbide & Carbon Chemicals Co., a division of Union Carbide & Carbon Corp. It is applied before planting either as a water suspenson or dry powder and thoroughly tilled into the soil. Crag Mylone does not require plastic covers. Qualified researchers can obtain test quantities and detailed literature. Check No. 6536 on the coupon and mail it to Croplife.

No. 5643—Equipment Catalog

A new 28-page sales catalog is now available to acquaint dealers and prospective dealers with the 1957 Midland Co. line. The new catalog covers in detail the new 3.6 H.P. riding rotary mower, four rotary mower models, 2 to 2¾ H.P., and eight tillers, ranging from 2¾ H.P. on up to 6.8 H.P., including riding tiller models. Interested dealers may obtain their free copy of the catalog by checking No. 5643 on the coupon and mailing it to this publication.

No. 6538—Safety Folder

United-Heckathorn is now offering, free of charge, a revised edition of a wallet-sized safety folder including a revised list of antidotes for all the agricultural chemicals. The list contains antidotes for the newer agricultural insecticides such as Phosdrin, Thimet and Guthion. A new section concerning disposal of empty containers is included, together with a list of the latest approved safety equipment for handling of agricultural chemicals. Secure the folder by checking No. 6538 on the coupon and mailing it to Croplife.

No. 6532—Bulletin

The Velsicol Chemical Corp. has issued a new, 16-page bulletin covering technical aspects of the firm's line of solvents for herbicides and insecticides. The bulletin is designed as an aid to formulators in selecting appropriate solvents for the various insecticide and herbicide formulations. Velsicol claims the following specific properties of the solvents covered in the bulletin: (1) Chemical compatibility with herbicides and both synthetic and botanical insecticides. (2) A high solvency for insect toxicant materials and such herbicides as the 2,4-D and the 2,4,5-T esters. (3) Solutions of the insect toxicants and herbicides are stable over a wide temperature range. (4) The solvents have high flash points. (5) The solvents are non-corrosive to metals. (6) The high boiling range of these solvents (low volatility) favors the residual toxicity of the more volatile insecticides. For a copy of technical bulletin 214, "Velsicol Insecticide and Herbicide Solvents," check No. 6532 on the coupon and mail it to Croplife.

Entomologist Calls For Spray Program To Control Bark Beetle

MANHATTAN, KANSAS—More Kansas elm trees are being killed each year by drouth and bark beetle attack than were killed in the East by Dutch elm disease during the worst years.

That is the opinion of Hugh Thompson, entomologist in the Kansas agricultural experiment station, who joined the Kansas State College staff in October to do special research on insects affecting Kansas shade trees, and particularly the European bark beetle.

William Pickett, head of the Kansas State department of horticulture and city forester for Manhattan, Kansas has reported the removal of 600 dead American elms in Manhattan this past year. He estimates 200 more will be removed by early summer. Bark beetles were a major factor in this loss. Similar losses have occurred in other Kansas communities.

Mr. Thompson, in a prepared talk given at the third annual Kansas shade tree conference at Kansas State College, indicated that many of the Kansas elms now about to die could continue to live, if protected from large-scale attack by the bark beetles.

He recommended extensive programs for spraying bare branches of valuable elm trees during late winter or early spring with a heavy application of 2% DDT emulsion (a heavy application would be 10-15 gallons per tree of DDT emulsion). The bark beetles would be killed in late April and early May as they crawled around on the treated bark.

LIQUID FERTILIZER

LAFAYETTE, IND.—Indiana farmers used about 15,000 tons of liquid fertilizer last year and demand for the product is spreading, according to A. J. Ohlrogge, Purdue University agronomist.

Aircraft Sprayers Instructed on Use of Pesticides at Minnesota One-Day Course

ST. PAUL, MINN.—A short course for aircraft sprayers and dusters was held Feb. 20 at the University of Minnesota, with some 200 aerial custom operators in attendance. University entomologists and plant pathologists, forestry experts, and USDA personnel were on the program under the general chairmanship of A. W. Buzicky, assistant state entomologist, St. Paul.

Practical instructions were presented to the fliers by speakers on the program. George Holey, Minnesota department of aeronautics, presided at the morning session and M. Ellertson, deputy commissioner of agriculture of Minnesota was chairman of the afternoon portion of the meeting.

Statistics quoted by J. R. Sandve, supervisor of community and institutional pest control service of the division of plant industry, Minnesota department of agriculture, indicated that aerial application of pesticides within the state is on the increase and that prospects for additional pest control work are bright.

In a talk by Mr. Holey, it was pointed out that accidents of agricultural aircraft have declined recently, and that new safety precautions taken by the fliers will continue to have a beneficial effect.

An assay of the field crop insect outlook for the state was presented by Mr. Buzicky, and recommendations for pest control materials for 1957 were outlined by L. K. Cutkomp, entomologist of the University.

R. G. Robinson, assistant professor in the department of agronomy and plant genetics, discussed weed control in field crops, warning the pilots against the dangers of herbicidal drift which might damage adjoining fields.

Since weather conditions greatly affect the operations of aerial sprayers, advance knowledge of rainfall and general conditions in an area are of particular importance to the operator, it was pointed out in a talk by P. W. Kenworthy, meteorologist in charge of the weather bureau at the Minneapolis airport. He told the fliers of the availability of forecasts and urged them to make use of these services.

That chemical control of rust on grain crops is gaining in importance was pointed out in a talk by J. B. Rowell, associate professor and USDA plant physiologist, of the University of Minnesota's department of plant pathology. He outlined progress made in this field during the past few seasons and predicted an even greater application of plant disease contr chemicals in the future.

Hart Graeber, supervisor of fore pest detection and information, Mi nesota department of agricultur presented a study on the biology a status of the Jack pine budwo which is an economic pest in t pine woods of northern Minneso He presented a map showing t counties affected by this pest a described the defoliating activities the insect. He said that 100,000 ac in Minnesota may be treated ne summer for control of this insect.

James W. Butcher, research entomologist of the Minnesota department of agriculture, described the anticipated control program against the Jack pine budworm for 1957. Pictures of the insect's depredations were shown on a screen with instructions for detecting the pest's presence in an area.

Two papers on brush control we presented in the afternoon session, b Lyle Argetsinger of Kimberly-Cla Co. and H. L. Hansen, associate pr fessor of forestry, Univ. of Minneso

Mr. Argetsinger told the operato that spraying for brush control i forest areas is not as simple as spra ing crops, since trees and brus represent many species and all ag and heights of growth. He said tha aerial sprayers hired to do the jo in past years have found it necessar to go over the area carefully befor applying pesticides, and to place flag at the top of the highest trees a markers. It is easy for sprayers t lose sight of the actual area to b treated, he said, particularly in heavily-forested territories.

Prof Hansen continued the brus control discussion, pointing out fur ther some of the peculiar problem of forest spraying. Tree crops nee from 15 to 40 years to mature, h reminded, and in many cases, th unwanted vegetation may be talle than the valuable crop.

Still, he went on, if sprayers ca prove themselves in forest brush control work, a tremendous business potential may be realized. Timber is a valuable crop, he said, and good pest control a thing greatly to be desired.

Declaring that the pilot is the key figure to successful air control o forest pests, he described the procedure followed by one successful operator who was hired to do a job. "This pilot arrived early and took the time to discuss the entire operation with the people who had hired him," Mr. Hansen said. The pilot then made a "dry run" over the area to get a good mental picture of the area, discovered landmarks and made sure he knew the boundaries, then talked over these matters with the company before taking off on the actual spraying run. "This pilot did an excellent job," was the comment of the speaker.

New developments in aerial dispersal equipment were discussed by Arthur Gieser, aircraft pilot of the plant pest control branch, USDA, Beltsville, Md. He said that tests made by USDA indicate that for the most accurate spraying, booms should not be more than 40 feet wide. Beyond that range, he said, the wind currents tend to pull the spray or dust particles inward toward the plane.

He presented a formula by which operators may figure the number of acres covered per minute, when the speed and the width of swath is known. The formula, he said, is based on 100 mph times 100 ft. (width of boom) equals 20.2 acres a minute. Using this factor, it is not difficult to calculate the number of acres that can be covered in a given time, when speed and swath are known, he said.

APPRECIATION PROGRAM

GIRARD, ILL.—Friends and customers were guests of the Girard Elevator Co.'s management at the annual appreciation party here. Music, films, a comedy skit and a ham dinner were highlights of the evening.

R. J. Dorman

EGO APPOINTMENT—Ralph Engrom, sales manager of the RegO vision of Bastian-Blessing Co., Chigo, has announced the appointment R. J. (Dick) Dorman as assistant les manager. Mr. Dorman will be charge of national sales and serce of anhydrous ammonia equipent and the development of this ld of RegO precision equipment. r. Dorman was graduated from illsaps College, Jackson, Miss., and artan School of Aeronautics, Tulsa. e served in the air force in World ar II and the Korean War. Before ining Bastian-Blessing, Mr. Dorman as director of the Liquefied Comressed Gas Division of the Motor ehicle Comptroller office for the ate of Mississippi.

irginia-Carolina ales Show Gain in ast Half of 1956

RICHMOND, VA. — Net sales of irginia-Carolina Chemical Corp. in e six months ended last Dec. 31 taled $21,826,796, compared with 1,780,245 in the corresponding pe- od a year earlier, according to the m's unaudited financial results.

The firm reported a loss in net come before taxes of $748,439 and loss in net income of $468,418 aft- tax credit. Comparable figures r the last six months of 1955 were sses of $48,663 and $35,245.

In a statement accompanying the eport Richard E. McConnell, secreary, said:

"A current study of the company's ssets indicates that there are propties amounting to approximately 00,000 which have no present vale. This loss has been reflected in e results for the first six months. ssets affected include the company's uranium recovery plant, dermined to be an uneconomical peration, and certain other items of achinery rendered obsolete by proess changes.

"The balance of the loss for the eriod can be attributed to special harges involving the fiber division nd the stockholders' meeting held n July 18, 1956.

"Consideration should be given to ll of these extraordinary factors in omparing this statement with the esults of the previous year.

"Since the heavy fertilizer buying eason in the spring is responsible r a major portion of your comany's sales, it should be emphasized hat the financial results for the first x months are not indicative of the rend of earnings for the entire fiscal ear."

DELAWARE FOLDERS

NEWARK, DEL. — An extension lder on control of fruit insects and seases in orchards and home plantgs and another on insect and disse control on vegetables have been blished by the University of Dela- re.

Rain Shows Value of Range Ground Cover

COLLEGE STATION, TEXAS—The depth to which late fall rains penetrated into the dry rangelands of Texas depended to a large measure upon the amount of cover on the ground. G. O. Hoffman, Texas A&M extension range specialist, says a check made in West Texas after a slow five inch rain showed that moisture penetrated only five inches deep on bare soil. On a nearby grassed area, which had been grazed rather short, the moisture penetrated to a depth of 15 inches.

Normally, he says, enough rain falls in Texas to cover the state to a depth of 30 inches with water. Unfortunately, he adds, only about 14% of this 30 inches is utilized, the other 86% is lost to runoff or evaporation.

For most effective use, Mr. Hoffman emphasizes that the water must be held on the ground where it falls for a considerable period of time.

Recently made observations showed that pits on hard bare soil materially increased the amount of water stored in the soil; that net wire terraces held up lots of water and greener grass showed along these terraces; that fallen trees and brush also effectively slowed runoff and held enough moisture to germinate and start growth of native grasses and that this brush on the ground protected young seedlings, permitting them to become better established.

Areas on which brush was controlled had four times more water available for grass growth than did areas still covered by brush, said Mr. Hoffman.

The specialist believes that a ton of plant material left on the ground per acre will materially retard runoff and increase water penetration. Too, he says, a ground cover in the summer holds down both evaporation and soil temperatures. Last summer temperatures were checked on grassed and bare soil areas. The difference was 40° cooler under the grass cover.

Mr. Hoffman recommends deferred-rotation grazing, brush control, reseeding, good soil and water conservation and proper stocking as practices for getting and keeping a grass cover on rangeland.

SBA Loans

WASHINGTON — Small Business Administration has announced approval of a $250,000 loan to Farm Fertilizer, Inc., Omaha, and a loan of $150,000 to Ark-La Feed & Fertilizer Co., Magnolia, Ark.

Oregon Scientists Report on Weed Tests at State Meeting

CORVALLIS, ORE.—Optimistic reports on the chemical war against weeds come from Oregon State College where scientists chalked up notable gains during the past year in major crops such as wheat, corn, and alfalfa.

Results reported at the recent annual winter meeting of the Oregon Weed Conference also point to more economical weed control in vegetables, as chemicals replace hand or mechanical weeding. Selective removal of broadleaf weeds in grass-legume pastures was another encouraging highlight of the meeting.

New uses for existing chemicals, plus introduction of several new chemicals, need only repeat performances this year to warrant commercial recommendations, scientists and industry men stated. OSC findings were reported by agronomists William Furtick, Dave Chilcote, and D. G. Swan and Roland Laning, horticulturist.

Speakers reported that Simazin gave nearly 100% control of weeds in field corn for the full growing season, and indications of a boost to corn yields.

The speakers said that the material is used as a soil sterilant in Europe. One-year trials in western Oregon, however, showed the product to be selective, killing all crops and weeds commonly found in the area except corn.

Profs. Chilcote and Furtick say two pounds of Simazin an acre in 30 gal. water applied just before corn emerged, kept plots weed-free throughout the growing season. The estimated cost was $6 an acre, they said.

Indications are that the chemical gives a boost to corn yields with more and larger ears, the researchers said. The possible yield increases were noted in comparison with adjoining test plots kept free of weeds by cultivation, but the initial trials were too small to make definite yield claims, it was explained. Further research will now investigate possibilities of hormone stimulus in the material, also possible insect or disease-control properties, they said. Applied at the two-pound rate, Simazin does not appear to leave any residue in the soil that would be harmful to crops the following year, the speakers reported.

Another herbicide, trichlorobenzoic acid (TCB) brings promising control of morning glory, the number one perennial weed pest in the Columbia Basin's low rainfall wheatlands, it was pointed out.

Three pounds of TCB an acre in 40 gal. water gave more effective control than standard treatments for the area. Materials were applied in the spring, during the fallow year, when morning glory was in the early bud stage.

Mr. Swan reported 50 to 60% control of morning glory with TCB one year following the spring treatment. Spring application of 40 lb. TCB gave 99% weed control and caused no apparent damage to wheat seeded the following fall.

Karmex DW gave control of most serious weed pests in eastern Oregon alfalfa stands, Mr. Swan reported. Three pounds of Karmex DW in 30 gal. of water cntrolled 90% of cheatgrass and Canada bluegrass and 100% annual foxtail barley, he said.

Mr. Swan stated that the chemical should not be applied until alfalfa stands are at least one year old and recommended spraying between Oct. 15 and Dec. 15 for best weed control. The three-pound rate is for the commercial product of 80% Karmex DW.

The federal Food and Drug Administration recently cleared the three-pound treatment, finding no chemical trace in either meat or milk of animals fed hay from treated alfalfa stands.

Yields of first cutting "pure alfalfa" were doubled by the treatment although total tonnage dropped slightly with the weed clean-up. Untreated adjacent plots yielded about 50% weeds.

Cost was about $12 an acre, but treated fields remained almost weed-free for three years, it was reported. Future tests will also measure longevity of alfalfa stands as a result of less weed competition.

Butyric acid derivatives of 2,4-D and MCP selectively controlled broadleaf weeds in legumes and grass-legume pastures in OSC trials last year, it was stated. Two pounds of the butyric acid derivatives killed nearly all dock, both Canada and bull, thistle, and buttercup in grass legume pastures in western Oregon with only a temporary setback to pastures. The speakers added that the best time to apply is when weeds are in active growth stage in early and mid-summer.

Broadleaf weeds convert these materials to regular 2,4-D and MCP and are killed, Mr. Furtick explained. Many legumes, however, including alfalfa and most clovers, are unable to change the compounds.

The materials have also controlled such annual weeds as lambsquarter, pigweed, and mustard in seedling stands of alfalfa, white clovers, red clover, and peas. Recommended application is ½ to 1½ lb. chemical an acre in 40 gal. water, when weeds are young and tender, usually in early May. Mr. Swan reports that peas were not damaged at chemical rates up to two pounds.

A spray mixture of dinitro amine and a new chemical, Randox, shows promise of dual-control for both broadleaf and grassy weeds in pole beans and sweet corn, Mr. Laning reported following preliminary trials at Corvallis.

Dinitro amine as a pre-emergence spray has become standard procedure for 90% of Oregon's bean growers and three-fourths of the sweet corn growers, he said. But it has still left the job of hoeing or cultivating to control stands of grassy weeds.

Mr. Laning found that a mixture of three pounds dinitro amine and four pounds Randox per acre as a pre-emerge spray, controlled both weed types for seven weeks. Materials should be applied with enough water to give good coverage, about 30 to 40 gallons, he said. Mr. Laning used the materials for "complete ground coverage" and said application rates could be cut to one-third if "band sprayed" along the crop row.

A companion chemical, Vegedex, is less water-soluble than Randox. Since Vegedex will remain in the soil longer, it is best where heavy rain occurs or when sprinkler irrigation is used, he said. Randox would be most effective in areas of limited rainfall or with furrow irrigation. Five pounds per acre as pre-emerge spray also controlled grassy weeds in onions.

Mr. Laning reported good control of weeds in cucumbers and squash with a pre-emergence spray of four pounds an acre of amino triazol (ATZ). The treatment did not reduce yields of cucumbers but caused slight reduction in squash yields, Mr. Laning said.

Mr. Furtick posed some long-range research problems for the conference, which was attended by approximately 100 chemical applicators, farmers, industry representatives, scientists, and county extension agents.

Science must learn soon, Mr. Furtick stated, whether row crop cultivation will be necessary when weeds can be controlled chemically for a whole season. Is tillage necessary for wheat production if chemical summer fallowing proves out? Will lack of soil aeration affect soil nitrogen?

The scientist said more work is also needed on the effects of soil temperature on weed-killer action on crops and weeds. He also raised speculation on possibilities of a chemical soil treatment that would break dormancy of all seeds in the soil at once, rather than having weed seed germination spread out over a period of years.

John B. Gay Named To New Stauffer Post

PORTLAND, ORE.—Stauffer Chemical Co. has appointed John B. Gay, since 1942 superintendent of its Portland, Ore., plant, as plant manager of its Vernon, Cal. plant. He is replacing H. L. Herkelrath who, for reasons of health, has asked to be relieved of some of his responsibilities but still remains as staff assistant to the plant manager.

Stauffer has named Charles F. McMackin as superintendent of the Portland plant.

Mr. Gay joined Stauffer in 1927 as an operator in the Richmond, Cal., carbon bisulfide plant. He is a graduate mechanical engineer and has been successively sulfuric acid plant operator, control chemist, catalyst researcher, hydrochloric acid plant foreman, and engineer in the San Francisco office.

Mr. McMackin holds a B.S. in chemistry and joined Stauffer in 1943 as a control chemist. After serving as an electronics technician in the U.S. Navy during World War II, he rejoined Stauffer as a plant engineer.

SCHOLARSHIP WINNER

MOSCOW, IDAHO — Lloyd M. Cox, Lewiston, a junior majoring in agronomy at the University of Idaho, has been awarded the 1956-57 Pacific Northwest Plant Food Assn. $100 scholarship.

Illinois Farmers Make Profit Of $7 Million With 1956 Insect Treatment, Spray School Told

URBANA, ILL.—Corn borers, spotted alfalfa aphids, latest chemical weed control findings and brush control practices highlighted the ninth Illinois Custom Spray Operators School held recently at the University of Illinois campus in Urbana.

About 600 attended this event sponsored by the University of Illinois College of Agriculture and the Illinois Natural History Survey. Speakers included staff members of the host institutions, guest speakers from Purdue University and Kansas State College, and commercial spray operators.

Treatment of insect pests in field crops gave Illinois farmers a profit of $7 million above cost of treatment in 1956, according to an estimate given by H. B. Petty, extension entomologist at the University of Illinois College of Agriculture and State Natural History Survey.

Mr. Petty estimates that about 1.4 million acres of field crops were treated with insecticides during 1956. His estimates are based on results of a survey of all Illinois counties. Insects included in the survey were corn borer, grasshopper, cutworm, chinchbug, soil insects, pea aphid, sweet clover weevil, spotted alfalfa aphid, leafhopper and spittlebug.

The largest number of acres—about 665,000—was treated for corn borer, and the estimated profit was $4.9 million. Next highest was for soil insects with 370,000 acres treated and an estimated profit of $1.6 million.

About half of all acreage was treated by individual farmers. About one-fourth was treated by commercial ground applicators, and the other fourth by airplane spraying.

Mr. Petty pointed out that these figures include only a few of the major insects found in field crops. There are other insects in field crops that are being controlled with insecticides. Also, treatment of fruit and vegetable crops was not considered in this survey.

The overwintering corn borer population in the fall of 1956 was less than half that of the fall of 1955, Mr. Petty reported. The average population per 100 stalks was 161 compared to 378 a year earlier.

Past experience has shown that counties with 100 or more borers per 100 stalks of corn may develop a borer problem. Mr. Petty pointed out that the northern two thirds of Illinois should look for trouble next year if conditions are favorable for borer development.

W. H. Luckmann, research entomologist for the Illinois Natural History Survey, said that timing is the most important part of any corn borer control program. He credits the high degree of control obtained by Illinois farmers in 1956 to a general acceptance of the tassel ratio method of timing treatment. This ratio compared the height of the developing tassel inside the plant with the extended height of the plant. When you divide the tassel height by the plant height and multiply by 100, you get the tassel ratio.

Mr. Luckmann stressed that treatment should be applied when the tassel ratio is from 30 to 50. Treatment will be justified in any field with 75% or more of the plants showing fresh leaf feeding in the whorl provided the field has a tassel ratio of 30 or higher.

The recommended rates given for 5% DDT clay granules in corn borer control was 12 lb. per acre with ground equipment and 20 lb. per acre with airplane. Mr. Luckmann told custom sprayers not to mix granules which have two different types of clay carriers.

In reporting farmers' results using DDT granules and sprays, H. B. Petty pointed out that for all practical purposes, farmers obtained the same degree of corn borer control with properly applied amounts and correctly timed applications of either DDT granules or sprays.

The average control by farmers in 7 fields sprayed with 1½ pounds of DDT at the correct time was 91%. In 9 fields treated with 12 to 20 lb. of 5% granules at the right time average control was 90%.

Mr. Petty reported farm demonstrations to show the effects of DDT treatment on corn borers had been made in 1947, 1948, 1949, 1950 and 1956. The 83 farms which cooperated in these tests left a small portion of the field untreated to compare with the treated section. The average control of borers increased from 52% in 1947 to 81% in 1956, when all applications including incorrect timing were included.

Mr. Petty credited correct timing for most of the increased borer control obtained during this period. With correct timing by using the tassel ratio method, he believes farmers can obtain exceptionally good borer control. With treatments timed correctly, using insecticides to control corn borers can be a profitable practice, Mr. Petty said.

Giving some first hand observations on commercial brush control during the last 10 years was Homer L. Jacobs, Davey Tree Expert Co., Kent, Ohio.

Mr. Jacobs credited better and higher concentrated formulation of the so-called hormone herbicides and their lower costs with making it possible to kill or control most brush species.

Alleged sickness and death of livestock following use of herbicides are of great concern to owners and applicators, Mr. Jacobs stated. He reported evidence continues to accumulate to show little likelihood that 2,4-D and 2,4,5-T as used are dangerous. He feels that those engaged in application might courteously, but with increasing firmness, resist claims for this type of damage.

Mr. Jacobs said that amine forms of 2,4-D and 2,4,5-T have been used with generally good brush kill and much less off-the-right-of-way damage than where the "low-volatile" esters were used.

A trend toward the use of straight 2,4,5-T in brush control was also reported. Mr. Jacobs feels this trend is justified because of the better kill of resistant species.

Earl Spurrier, extension agronomist at the University of Illinois reported Randox (or CDAA) appears to be a promising herbicide to control giant foxtail or wild millet. This weed has become a serious problem in many corn and soybean fields in central Illinois. Randox appears to be effective when applied broadcast at 4 lb. of acid per acre in at least 20 gallons of water.

Mr. Spurrier said that randox, like other pre-emergence chemicals, is most effective if there is sufficient soil moisture to cause germination of the grass weeds. To get top results from the treatment, early cultivation should be avoided unless absolutely necessary.

Where randox was mixed with 2,4-D for grass and broadleaf control in corn, the results seemed to be more consistent. About 81% of the locations reporting use of the randox plus 2,4-D treatment indicated that

there was 80% or better early season control of both grasses and broadleaves and 70% reported 70% or better full season control.

Even though grass control is less than 100% effective, if corn yields are increased, it may be profitable to use this pre-emerge treatment, Mr. Spurrier concluded.

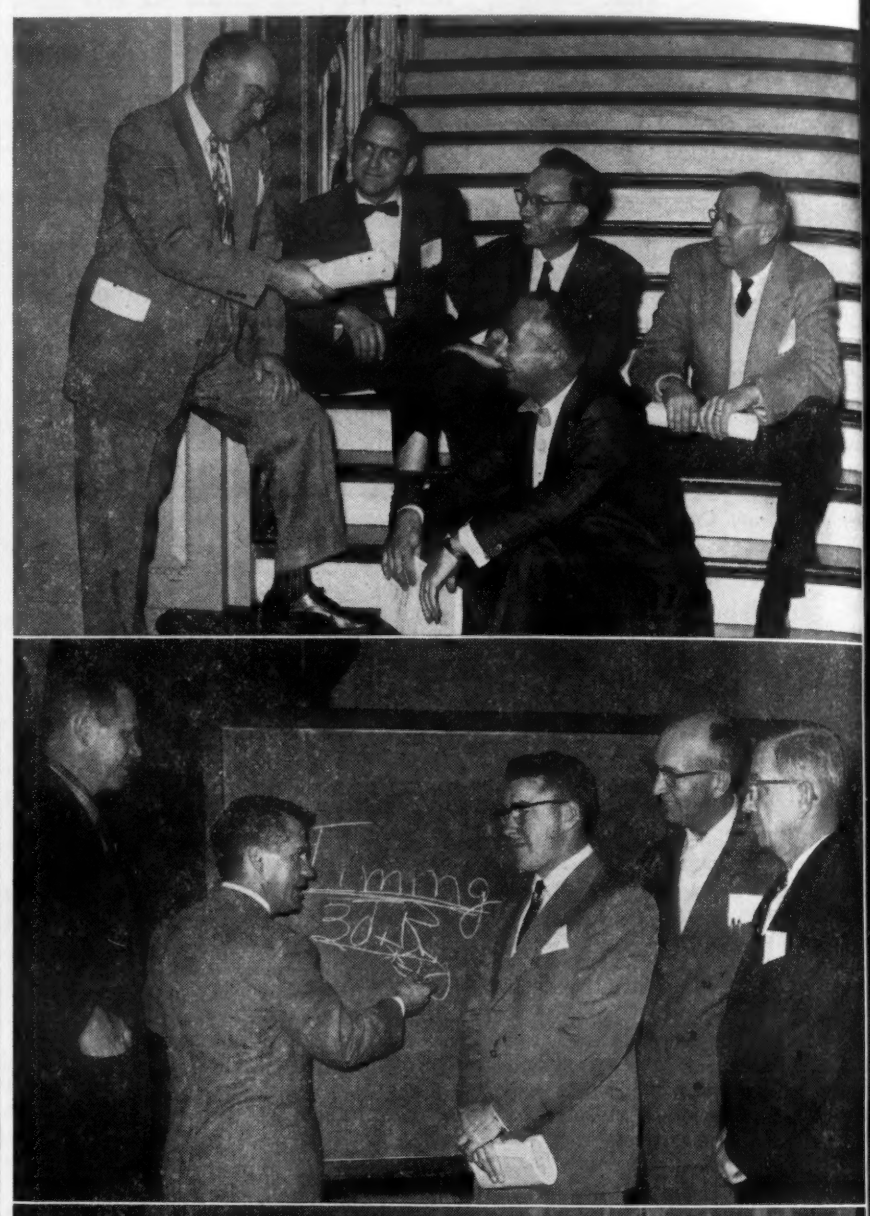
Soybeans seem to have a natural tolerance to randox used as a pre-emerge treatment, reported Fred Slife, University of Illinois weed specialist. In tests at the University of Illinois it has been more stable under varying weather conditions than other pre-emerge chemicals tested. And soybean stands are not likely to be reduced with it.

After soybeans have emerged from the ground, there is less possibility of using chemicals for weed control, Mr. Slife said. A few serious broadleaf weeds can be controlled with 2,4-D at ⅛ of acid per acre in the amine form. But this treatment is recommended only in bottomland areas and where cockleburs and annual morning glories are of particular importance. Mr. Slife warned that extreme care and supervision are needed to avoid injury to soybeans with this treatment.

Business meetings of the custom ground sprayers and aerial applicators were held the day prior to opening of the school.

New officers of the Illinois Ground Spraying Assn. are Joe Garland, Dixon, president; Vernon Anderson, Newark, vice president; A. E. Pickard, Mt. Vernon, secretary-treasurer. Board members elected were Bill Cox, Jacksonville; Jack Kemp, Belvidere, and Robert Hall, St. Charles.

The Illinois Aerial Applicators elected Bob Danforth, Monmouth, president; Les Gilbert, Arcola, vice president, and Lillard Heddon, Pekin, secretary-treasurer.



ILLINOIS CUSTOM SPRAY OPERATORS MEET—Scenes at the recent ninth meeting of the Illinois Custom Spray Operators School are shown above. In the top photo, J. H. Bigger, left, Illinois Natural History Survey, discusses soil insect problems with William Woodman, front, Velsicol Chemical Corp., and, to Mr. Bigger's left, Curt Kenyon, Dow Chemical Co., M. Manger, Monsanto Chemical Co., and L. Ewald, Rochelle, Ill., insecticide distributor.

In the center photo, H. B. Petty, at the board, University of Illinois, chairman of the sprayers school, emphasizes the importance of timing insecticide applications to, left to right, A. C. Kamm, Monticello, Ill., farm adviser; Herbert Stam, Watseka, Ill., a sprayer; Glen Wilken, Monticello farmer, and L. A. Hodam, Bement, Ill. banker.

Below, Lillard Hedden, center, Morton, Ill., secretary of the Illinois Aerial Applicators Assn., is caught in a conversation with Les Gilbert, left, vice president of the association, and Bob Danforth, right, president.

M. J. Wurzbach in New U.S. Steel Post

NEW YORK—Appointment of M. J. Wurzbach to the new post of staff director—product information in the public relations department of U.S. Steel Corp., was announced recently by Phelps H. Adams, executive director of public relations and assistant to chairman of the board.

Mr. Wurzbach, a former Cleveland newspaperman, leaves the position of assistant district director of public relations in Cleveland to establish offices of the new section in Pittsburgh.

DDT TOLERANCE

(Continued from page 1)

e establishment of such a toler-
nce.

In reviewing the factors involved setting the new tolerance, FDA mments as follows: "The tolerance 7 parts per million for DDT in ef fat was requested to permit eding of beef cattle with field corn rage that had been treated with DT for corn-borer control. No toler-nce was requested for DDT in or on rn forage, on the basis that it is not oved off the farm and does not me within jurisdiction of the Fed-al Food, Drug, and Cosmetic Act.

"The tolerance for DDT in beef at was requested to permit, in ad-lition, use of DDT in 'back rubbers,' a device used to combat flies on beef cattle. Evidence in the petition indicates that this tolerance can be met if the above uses are employed according to good agricultural practice. Residues of DDT in the fat can be reduced by placing the animals on feed free of DDT be-fore slaughter.

"Residue studies indicate that if eef cattle are fed corn forage on which any DDT applications in addi-ion to the two early corn-borer appli-ations have been made, or if they re fed ensilage made from corn reated with DDT, or if they are prayed with or dipped in DDT, resi-lues of DDT in the beef fat in ex-ess of the 7 parts per million toler-nce are likely to result. DDT resi-lues are found in the fat, rather han in muscle tissue of meat ani-nals.

"The tolerances of 7 parts per mil-ion for DDT in the fat of hogs and heep were requested to permit the lipping or spraying of these animals o combat certain vermin. Instruc-ions for use in the petition indicate hat treated hogs and sheep should e held at least 30 days before laughter.

"The Secretary of Agriculture has ertified that this pesticide chemical s useful for the purposes for which olerances are being established."

After consideration of the data ubmitted in the petition and other elevant material which show that he tolerances established in the or-ler will protect the public health, olerances for residues of DDT will read as follows:

§ 120.147 Tolerances for residues of DDT. Tolerances of 7 parts per million for residues of DDT (a mixture of 1,1,1-trichloro-2,2-bis (p-chlorophenyl) ethane and 1,1,1-trichloro-2- (o-chlorophenyl)-2-(p-chlorophenyl) ethane are established in or on the following raw agricultural commodities: The fat of meat from cattle, hogs, and sheep; sweetpotatoes (from postharvest use)."

FDA adds that "any person who will be adversely affected by the foregoing order may, at any time prior to the thirtieth day from the effective date thereof, file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 5440, 330 Independence Avenue SW., Washington 25, D.C., written objections thereto. Objections shall show wherein the person filing will be adversely affected by this order, specify with particularity the provisions of the order deemed objectionable and reasonable grounds for the objections, and request a public hearing upon the objections. Objections may be accompanied by a memorandum or brief in support thereof. All documents shall be filed in quintuplicate."

The Food and Drug Administration has also set new tolerances for residues of Aramite, at 1 part per million in or on the raw agricultural commodities: apples, blueberries, cantaloups, celery, cucumbers, grapefruit, grapes, green beans, lemons, muskmelons, oranges, peaches, pears, plums, raspberries, strawberries, sweet corn (kernels) but not forage thereof, tomatoes, and watermelons.

A tolerance of zero is established for residues of Aramite in or on the raw agricultural commodities of alfalfa and soybeans (whole plant).

A tolerance of 5 parts per million has been established for residues of Chlorobenzilate in or on each of the following raw agricultural commodities: apples, cantaloups, lemons, oranges, and pears.

INTEREST IN LIQUID

REFUGIO, TEXAS — Farmers in this area are showing considerable interest in liquid fertilizer, according to D. F. Bredthauer, county agent. He said most land owners had first sent off soil samples to the state laboratory at Texas A&M College, then put the fertilizer on as recommended.

Co-op Will Build New $13½ Million Plant in Idaho

CHICAGO, ILL.—Central Farmers Fertilizer Co. has announced plans to proceed immediately with its phosphate mine and cal-meta phosphate engineering plant at Georgetown, Idaho. The announcement was made by Joseph J. Lanter, president, following a meeting of Central's directors and shareholders.

The plant will be constructed in Georgetown Canyon, approximately 9 miles northeast of Georgetown, Idaho. The cost of the project will be $13,500,000 and will comprise mining of phosphate ores on the 2,300 acres of phosphate deposits owned by the company.

This plant will be the first commercial production designed outside of TVA. In addition to cal-meta phosphate, the plant will also produce acidulated grade rock phosphate.

Charles M. Miller, director of manufacturing for the co-op, said grading the 10 miles of railroad from the Union Pacific line to the plant site was now in progress. The plant is being designed by the F. C. Torkelson Engineering Co. of Salt Lake City. It is anticipated the contract for construction will be awarded about April 1, with actual construction to start about June 1. Mining operations will start in the summer of 1957 and the rock phosphate production of the plant will start in late 1958.

Central Farmers Fertilizer Co. is an inter-regional cooperative corporation owned by 16 regional cooperatives who serve some 2 million farmer patrons in 15 Midwestern states. The rock phosphate and cal-meta phosphate production of the Idaho operation will be distributed exclusively through these channels.

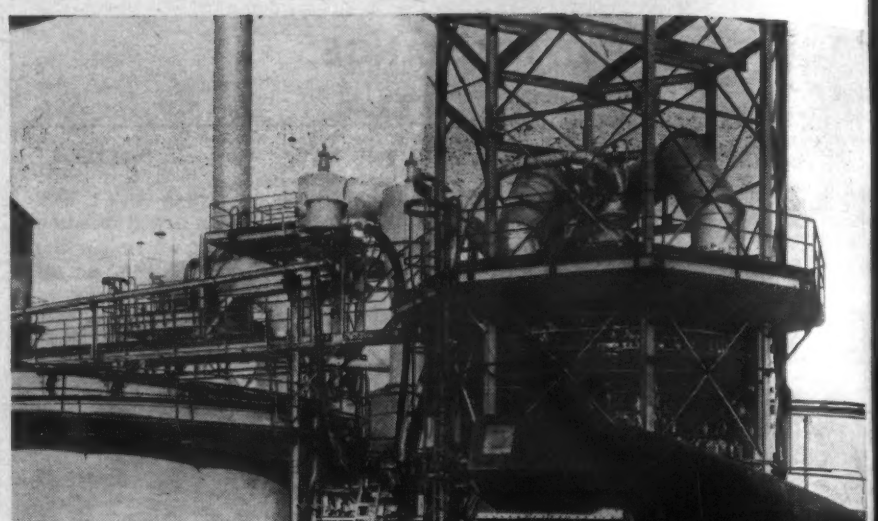
Cotton Diseases Cut Texas Yield 10% In Last Five Years

COLLEGE STATION, TEXAS—Estimates place the loss to Texas cotton producers during the past five years from diseases at more than 2,000,000 bales. About 20% of the total is charged to seedling diseases. Angular leaf spot or bacterial blight, root rot, boll rots, fusarium wilt, verticillium wilt, root knot, nematodes and rust, says Dr. Harlan Smith, Texas A&M extension plant pathologist, are other diseases of great economic importance.

The loss during the last five years amounts to about 10% of the total yield but last year's loss was 11.5%, the highest on record for the state. The increase last year is attributed to the widespread appearance of verticillium wilt in the High Plains and Pecos areas and (apparent) increases in cotton root rot in the Lower Rio Grande Valley and in the Pecos, Fort Stockton, Bakersfield areas of West Texas. Rust was found in South Texas for the first time since 1943 and fusarium wilt in West Texas for the first time ever. Losses to root rot in the Central Blackland area last year were less than usual. This loss normally ranges from 10 to 25% annually, Mr. Smith said.

SNAP BEAN LEADER

PORTLAND, ORE.—Oregon led the nation in production of snap beans for processing during 1956 when growers harvested 77,400,000 tons, some 4,500,000 tons below the previous year's output. Of the 24 snap bean producing states Oregon rated second in yield per acre, third in total acreage harvested and fourth in average price received per ton. Roland H. Groder, Oregon State college fruit and vegetable specialist reports this all adds up to a $10,000,000 Oregon industry not including the value added by processing.



USI PLANT—Shown above is the new phosphoric acid plant of U.S. Industrial Chemicals Co. Division of National Distillers Products Corp. which has just gone into production at Tuscola, Ill. Annual capacity is 30,000 tons of phosphorus pentoxide, equivalent to about 60,000 tons of 75 per cent phosphoric acid. Sodium silicofluoride for water fluoridation and industrial uses will be a by-product of the plant.

U.S. Industrial Chemicals Completes Phosphoric Acid Plant at Tuscola, Ill.

TUSCOLA, ILL.—A new phosphoric acid plant has just been completed and put on stream by U.S.I. at Tuscola, Ill., it has been announced by Dr. R. E. Hulse, vice president of National Distillers Products Corp. and general manager of the U.S. Industrial Chemicals Co. Division. Production capacity of the new plant is 30,000 tons per year, expressed as P_2O_5 (equivalent to approximately 60,000 tons per year of 75% phosphoric acid).

The "wet-process" phosphoric acid is made from phosphate rock and sulfuric acid in the new plant which was designed and constructed by Singmaster and Breyer to use a process licensed from S. A. Metallurgique de Prayon, a Belgian company. The sulfuric acid used in the new plant is "spent" acid from the neighboring plant of National Distillers.

Sodium silicofluoride is also produced in the new plant as a by-product. Purification facilities are being installed, and by April the plant will be producing this material in a grade suitable for domestic water supply fluoridation and industrial uses.

The new phosphoric acid plant is built with a primary purpose of supplying phosphoric acid to fertilizer manufacturers, according to L. C. Byck, U.S.I. manager of heavy chemical sales.

He said that Tuscola, Ill. is the only location in the country where the three fertilizer ingredients: ammonia, phosphoric acid and sulfuric acid are produced for fertilizer manufacture. U.S.I. operates an ammonia and nitrogen solutions plant here and a sulfuric acid plant as well. Other U.S.I. sulfuric acid plants are located in Dubuque, Iowa and Sunflower, Kansas.

James C. Nichol Appointed to New Calspray Position

RICHMOND, CAL.—Appointment of James C. Nichol to agricultural specialist, advertising division, has been announced by L. F. Czufin, advertising manager of California Spray-Chemical Corp., Richmond, Cal. In his new position, Mr. Nichol will be responsible for initial planning and preparation of advertising materials, relating to insecticides, fungicides, and weed control products, manufactured by Calspray and marketed under their Ortho trademark.

Mr. Nichol was raised in Binghamton, New York and started with Calspray in 1953 after three years as a county agent in New York State. He worked for a year as sales representative in the Finger Lake area of New York and was then promoted to the position of branch manager, merchandising, for Ortho's Western New York marketing area with headquarters in Medina, moving from there to Richmond.

Mr. Nichol received his B.S. degree in agriculture at the University of Maryland. He is married and has two sons, and will live in Walnut Creek, Cal.

INSECT CONTROL GUIDES

COLLEGE STATION, TEXAS—Entomologists of the Texas Agricultural Extension Service have prepared informational guides covering control measures for the worst offenders in the insect world. The recently released series includes L-217, Stored Grain Insects; L-218, 1957 Texas Guide for Controlling Cotton Insects; L-219, Ways to Fight the Pink Bollworm and L-245, Texas Guide for Controlling Insects and Diseases on Fruits and Nuts.

Industry Patents and Trademarks

2,782,108

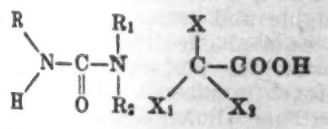
Production of Crystalline Ammonium Nitrate. Patent issued Feb. 19, 1957, to Herbert R. Antle, Dumas, Texas, assignor to Phillips Petroleum Co. A process for the production of ammonium nitrate prills which comprises spraying molten ammonium nitrate solution at a concentration of at least 94 percent and at a temperature which said ammonium nitrate flows freely into the upper portion of a prilling zone thereby breaking ammonium nitrate up into droplets, gravitating said droplets to the bottom of said prilling zone, admitting air into the lower portion of said prilling zone, and sending said air upward and countercurrent to the gravitating droplets, regulating the flow and temperature of said air so that it will cool the gravitating droplets to a temperature above the monoclinic critical temperature of said ammonuium nitrate solution but below the solidification temperature during the gravitating period thereby forming prills, removing said prills while still containing moisture in the range of 2 to 3 weight percent from said prilling zone at a temperature substantially the same as the said second temperature, and drying and cooling said prills.

2,782,111

Plant Growth Regulating Compositions. Patent issued Feb. 19, 1957, to Herman S. Bloch, Chicago, and Alfred E. Hoffman, Clarendon Hills, Ill., assignors to Universal Oil Products Co., Des Plaines, Ill. A plant growth regulating composition consisting essentially of an alkylbenzene hydrocarbon, said alkylbenzene hydrocarbon containing from 9 to 13 carbon atoms per molecule, and a compound selected from the group consisting of halogenated aryloxy monocarboxylic aliphatic acids, their salts, esters, amides, thioamides, and nitriles.

2,782,112

Herbicide. Patent issued Feb. 19, 1957, to Everett E. Gilbert, Flushing, Julian A. Otto, Long Island City, and Silvio A. Pellerano, Brooklyn, N.Y., assignors to Allied Chemical & Dye Corp., New York. A compound suitable for use as an herbicide having the general formula.



wherein R represents a cyclic group selected from the class consisting of the phenyl, alkyl-phenyl, aralkyl-phenyl, diphenyl, naphthyl, cyclohexyl and alkyl-cyclohexyl radicals, and their halogen substitution products; R_1 represents a group selected from the class consisting of hydrogen and an aliphatic hydrocarbon radical having no more than six carbon atoms; R_2 represents an aliphatic hydrocarbon radical having no more than six carbon atoms; X represents a halogen; and X_1 and X_2 represent a member of the group selected from the class consisting of hydrogen and halogen.

2,782,113

Fertilizer Compositions and Method of Preparation Thereof. Patent issued Feb. 19, 1957, to Grover L. Bridger and David R. Boylan, Ames, Iowa, assignors to Iowa State College Research Foundation, Inc., Ames. The method of producing a fertilizer composition from phosphate rock characterized by high phosphorus availability, comprising mixing phosphate rock with metallic sulphates selected from the group consisting of magnesium sulphate and a mixture of magnesium sulphate and potassium sulphate, controlling the relative proportions of phosphate rock to said metallic sulphates in the mixture so that said proportions are defined by a point falling within the labeled area of high phosphorus availability in the three component diagram of Figure 2, said area including the points falling on the solid boundary line therearound, heating said mixture to a temperature at which it can be completely melted, continuing said heating at said melting temperature until said mixture is converted to a fused, molten mass, then quenching said fused, molten mass to produce a fertilizer product characterized by high phosphorus availability.

OPEN HOUSE

EMPORIA, KANSAS—Open house was held in February by the Kansas Fertilizer and Chemical Co. at the firm's new location one-half mile west of here. On opening day free drawings were held and refreshments were served. Free favors were on hand.

Carolinas-Virginia Group Plans Meeting

RALEIGH, N.C.—The Carolinas-Virginia Pesticide Formulators Assn. will hold its third annual spring convention May 13-15 at the Cavalier Hotel, Virginia Beach, Va., W. R. Peele, Raleigh, secretary-treasurer, has announced.

AP&CC APPOINTMENT

LOS ANGELES—Ralph N. Hoh has been appointed western sales manager of industrial chemicals for American Potash & Chemical Corp., according to an announcement by William M. Clines, western general sales manager. The appointment marks the creation of a new section in the AP&CC western sales department brought about by the company's accelerated production of industrial chemicals in recent years, Mr. Clines said.

Missouri Aerial Applicators to Meet

COLUMBIA, MO.—Flight and chemical spray problems and discussions are scheduled for the two-day University of Missouri Aerial Applicators Short Course March 12 and 13, says Stirling Kyd, University extension entomologist in charge of program arrangements.

Discussions during the first day will be limited to flying subjects while the second day's program will deal with new chemical sprays, 1957 spray recommendations, and the safe handling of insecticides.

OREGON TRANSACTION

MYRTLE CREEK, ORE.—The Peterson Feed Store here was purchased by Ray Norton and will be managed by Chester Chamberlin. The store will be renamed Chamberlin's Feed & Seed. Operations will be continued as before.

Alabama Conference Hears Talks on Good Salesmanship, Developments in Pest Control

AUBURN, ALA.—Latest developments for control of insects, plant diseases, rodents and plant pests were disclosed at Alabama's 10th Pest Control Conference held recently at the Alabama Polytechnic Institute here.

The two-day program was attended by representatives of manufacturers and commercial companies, dealers, applicators, pest control operators, nurserymen, plant inspectors and extension and experiment station personnel. Represented were 37 manufacturers and 29 dealers, exterminators, applicators and nurserymen from nine states.

It was the first pest control conference to be sponsored by the year-old Alabama Association for the Control of Economic Pests in cooperation with the API Agricultural Experiment Station. George Williamson, Agricultural Chemical Service, Montgomery, president; Urban L. Diener, experiment station assistant plant pathologist, Auburn, vice president; and W. G. Eden, station entomologist, Auburn, secretary-treasurer, were elected to a second term of office.

George P. Wilson, aerial applicator, Foley, Ala., and O. H. Bowden, Farmers Marketing Exchange, Montgomery, were elected to three-year terms on the board of directors, succeeding Oscar Frazier, Selma, and H. C. Young, Florala. The other directors are T. J. Cavanagh, Mobile; N. R. Downey, Birmingham; B. P. Livingston, Montgomery; and J. E. Zeigler, Millbrook.

Keynoting the conference program, Joseph E. Burger, vice president and sales manager, Cornell Seed Co., St. Louis, Mo., declared that no matter how good we think we are, the day we stop getting better, that day we stop progressing. This, he said, is true of any business or profession.

In discussing qualities of good salesmanship, Mr. Burger emphasized proper use of "your eyes, your ears and your mouth." "Learn to listen with your eyes as well as with your ears and learn to keep your big mouth shut," he told the conference. Many sales, he explained, are lost by talking too much.

He said that five qualifications for successful salesmen in order of importance are: character, hard work, ability, courage and personality. "But, without character, first and always," he concluded, "the salesman will not succeed even though he may possess all of the other four qualities."

Wild garlic and wild onion can now be controlled by chemicals, the conference was told. In reporting on four years' experiment, V. S. Searcy, assistant station agronomist, said that although good control was obtained with chemicals, no plots were completely free of the pest. This, he said, points up the importance of a continuing control program for the reason that the bulblets remain dormant in the soil for an undetermined length of time. Of the several weedicides used in the experiments, the most effective and economical was 2,4-D, he said. The recommended rate is 2 lb. (acid equivalent) per acre in 50 gallons of water.

Progress in the field of chemical weed control during the past 10 years has been almost fantastic, declared W. C. Shaw, U.S. Department of Agriculture plant physiologist, Beltsville, Md., in reviewing recent advances in herbicides.

Chemicals, he said, are being applied for weed control on one out of every 10 acres of cultivated land in the nation. About 70% of the acreage sprayed and dusted for weed control was treated by farmers using their own equipment. The cost of materials on this acreage amounted to $26 million.

Control of rodents was discussed by E. F. Kennamer, extension fish and wildlife specialist. The cost of rat and mouse depredations in the U.S., he said, is one-third million dollars annually. Fall and winter are the best times for eradicating rodents because of the scarcity of their food supplies. Mr. Kennamer recommended two control measures: (1) rat proofing buildings and mechanical protection of foodstuffs; and (2) poisoning with a combination of pival and pivalyn.

R. C. Gaines, USDA entomologist from Baton Rouge, La., said that boll weevils in certain sections of Louisiana have developed resistance to the commonly used chlorinated hydrocarbon insecticides. He said that a joint research project dealing with the resistance problem is under way between the Louisiana Experiment Station and the USDA Entomology Research Branch.

One reason for the growing popularity of liquid fertilizers is that pesticides may be added for a combination soil treatment, T. W. Reed, California Spray Co.'s assistant manager of research and development, Moorestown, N.J., told the conference members.

Nevertheless, mixing pesticides with liquid fertilizers creates problems. Because pesticides that can be used with liquid fertilizers are reactive chemically, they cannot be mixed and stored with the fertilizer without losing their activity. Hence, it is necessary to mix the two at time of application. This, Mr. Reed said, is proving desirable rather than a disadvantage. It permits using a specific pesticide in the exact concentration needed with the fertilizer and at the proper rate.

"Know the construction detail of buildings before treating for termites," advised J. R. Cook of Decatur, Ala., president, Alabama Pest Control Assn. Failure to interpret construction details correctly can cause failure of treatment. Mr. Cook advised pest control operators to expand their business to include termite-treating of buildings while under construction.

E. P. Broadus, president, Mississippi Entomological Assn., warned against dangers growing out of the expanding use of organic phosphates for control of cotton insects. Unless applicators and cotton farmers are thoroughly informed of the danger of these compounds and necessary precautions to be taken, deaths could result, he declared.

The boll weevil is still the most important cotton insect, declared R. L. Robertson, API Experiment Station assistant entomologist. Hence, any spraying or dusting programs must be planned for control of the boll weevil. He advised using insecticides or mixtures at the right time to control other major pests while controlling the boll weevil.

Other guest speakers on the program included: C. C. Fancher, regional supervisor, Southern Plant Pest Control Region, Gulfport, Miss.; T. J. Ratcliffe, chief inspector, Georgia Department of Entomology, Tifton; B. G. Hall, manager, Morgan County Exchange, Hartselle, Ala.; and J. W. Kilpatrick, U.S. Public Health Service, Savannah, Ga.

API Experiment Station staff members also on the program were: L. L. Hyche, assistant entomologist; R. L. Self, plant pathologist, in charge, Ornamental Horticulture Field Station, Spring Hill; and E. J. Cairns, nematologist.

In a forum on "What's New in Pesticides," four chemical companies made brief reports on new compounds:

Guthion (Chemagro Corp.) is being released this year for first time but only in small quantities; said to be excellent for controlling resistant boll weevils.

Def (Chemagro Corp.) is a defoliant that will be available this year. Good results are reported to have been obtained from a rate of 2 lb. an acre.

Sevin (Carbide and Carbon Chemicals Co.) is a new compound for fruit, vegetable and cotton insect control. Will be available this year only for experimental purposes. Sevin is a low-toxicity material.

Kelthane (Rohm & Haas Co.) is a

w miticide that gives high initial ll and has long lasting residual ef-ct; is said that it will not kill pred-ory insects.

Perthane (Rohm & Haas Co.) is a lorinated hydrocarbon of low toxi-ty; is reported to be effective gainst fruit and vegetable insects d can be used just prior to harvest.

Phosdrin (Shell Chemical Corp.) is ted as a systemic phosphate com-ound. Its toxicity is comparable to at of parathion. However, because its short residual effect it can be ed on vegetables shortly before har-st.

Highlighting the annual banquet was the presentation of a plaque to W. A. Ruffin, Extension entomolo-gist, honoring him for his 30 years of service in the field of insect pest control. The presentation was made by J. L. Lawson, associate director, API Extension Service.

The conference was opened with elcome from Dr. Ralph B. Draugh-n, president of the Alabama Poly-echnic Institute, and Dr. Charles F. immons, associate dean and assist-nt director, API School of Agricul-ure and Agricultural Experiment tation. In his president's address, Ir. Williamson reported on the first ear's work of the Alabama Associa-ion for the Control of Economic ests. Dr. Coyt Wilson, associate di-ector and assistant dean, traced the istory of Alabama's pest control onferences.

COVER CROP

(Continued from page 1)

Koger, ACP administrator, stated re-ently. These practices under ACP sually include cost-sharing for the eed and fertilizer for establishing he cover.

Mr. Koger's comments were part of statement issued by the U.S. De-artment of Agriculture, to help larify provisions of the soil bank ertaining to cover crops on land laced in the acreage reserve.

The soil bank makes no provision for assistance to farmers for estab-lishing cover on the designated acreage reserve, H. L. Manwaring, deputy administrator, Commodity Stabilization Service, USDA, said in the statement.

"Although the agreement which farmers sign when they participate in the acreage reserve program does not require that the designated land be planted in a cover crop, it is a good farming practice to put a cover on those acres whenever practical," he said.

"Since acreage reserve land will be out of production, the opportunity is available to farmers for carrying out needed conservation measures, many of which are eligible for ACP cost-sharing.

"Farmers who are unable to carry out needed cover crop and other con-servation measures with their own resources are urged to make full use of the Agricultural Conservation Pro-gram."

The USDA statement came part-ly as a result of a movement by several industry groups, spearhead-ed by the National Plant Food In-stitute, to make provision in the soil bank program for establish-ment of cover crops on land idle in the acreage reserve.

Dr. Russell Coleman, executive vice president of the institute, point-ed to this deficiency in the soil bank program in a talk last November be-fore the Pacific Northwest Plant Food Assn. He told the association that if land placed in the soil bank is not covered, the U.S. could lose more than it would gain in soil fer-tility. He urged industry to work with state and local ASC committees to stress the importance of covering this land.

FRED W. HATCH

(Continued from page 1)

tivation. Most of them already have demonstrated to their own satisfac-tion the profit that comes from insect control, prevention of plant disease and fertilization.

These examples represent only a digest of the reasons why our indus-try will continue to expand. The ac-tual expansion, however, will still be up to us. But by recognizing our re-sponsibility to the nation and by bet-ter selling methods we can insure our growth. Some of these methods would include—

(1) Intensified education of our dealers so they can better instruct their customers in the proper use of our products.

(2) Closer contact by our mer-chandisers with county agricultural agents.

(3) More frequent use of field demonstrations so that customers can observe the results of proper insecti-cide treatment and soil fumigation procedures.

(4) Broader understanding of the safety margins of pesticides.

(5) Full compliance with the pro-visions of the Miller Amendment.

I am happy to say that the con-structive safety and promotional NAC programs already under way, and those planned for the immediate future, are assisting all segments of industry in each of these fields.

Grace Appointment

NEW YORK—Grace Research and Development Division of W. R. Grace & Co. announced recently that Dr. Thomas R. Steadman has been appointed manager of its miscellan-eous organic chemicals group. His office is in New York. For the past five years Dr. Steadman has been associated with National Research Corp. in Cambridge, Mass.

CSC Net Earnings Total $2.8 Million

NEW YORK — Commercial Sol-vents Corp. reports for the year end-ed Dec. 31, 1956, consolidated net earnings of $2,830,591, equal to $1.07 per share, after deducting extraordi-nary net charge of 13¢ per share, on 2,636,878 shares of common stock. Sales for the year were $58,745,254.

A dividend of 25¢ per share was de-clared Feb. 25 on the outstanding common stock of the corporation, payable March 29, 1957 to stockhold-ers of record at the close of business on March 6, 1957. Previous payment was 25¢ per share Dec. 26, 1956.

NEW BROMINE PLANT

SAINT LOUIS, MICH.—Michigan Chemical Corporation announces the completion and placing in operation of a new bromine plant at El Dorado, Ark. The facility is a joint-venture with Murphy Corp. of El Dorado.

Croplife®

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Midwestern states.

Pesticide Sales Potential High for 1957

Sales potentials for pesticidal materials of all kinds—for control of weeds, insects, plant diseases and rodents—appear to be promising for the upcoming season. With the annual spring meeting of the National Agricultural Chemicals Assn. being held this week in San Francisco, the eyes of the nation's pesticide manufacturing and marketing people are focused on the discussions under way at the Fairmont Hotel.

Fred W. Hatch, president of NACA, has an optimistic pre-convention word for the trade in his guest editorial appearing on page 1 of this issue of Croplife. He reminds that not only in agriculture are there good prospects for the movement of extra tonnages of pesticides, but also in connection with the building of new highways and other developments which will require great amounts of chemical aids to keep down the maintenance costs of these new roads.

The trade will second Mr. Hatch's observations, and it is likely that when the industry's history of 1957 is written, a considerable amount of space will have been given to progress made in the non-farm sale of pesticides.

In fact, the general theme of this year's NAC Assn. meeting centers around the importance of financing and credit to agricultural progress, the outlook for return on investment in the agricultural chemicals industry and the need for more techically-trained manpower. It is a realistic program for a forward-looking group.

There are also some realistic figures for the trade to use in its marketing program. Helping the farmer to see real dollars and cents value in the regular application of pesticides is an important matter when it comes to increasing volume and keeping the user sold on preventive application of various pest control materials.

From the recent Illinois Custom Spray Operators' School at Urbana came some facts that should make interesting sales ammunition for this season. It was reported by H. B. Petty, Illinois entomologist, that treatment of insect pests in field crops alone, gave Illinois farmers a profit of $7 million above their cost of materials and application in 1956.

He estimated that about 1.4 million acres of field crops were treated with insecticides during 1956, based on results of a survey of all counties in the state. Insects included in the survey were corn borer, grasshopper, cutworm, chinch bug, soil insects, pea aphid, sweet clover weevil, spotted alfalfa aphid, leafhopper and spittlebug.

The corn borer rated the greatest attention, both from the standpoint of acres treated and the estimated profit realized from control of this pest. Mr. Petty reported that some 665,000 acres were treated for the borer, and the profits therefrom were nearly $4 million.

Soil insects were next in importance, with 370,000 acres receiving treatment with an estimated profit of $1.6 million.

These figures, it was pointed out, include only a few of the major insect pests found in field crops. There are additional ones, of course, and there are also important economic pests in fruits and vegetable crops that were not included in the surveys made in Illinois. If one were to add these benefits to the profits known to have accrued from the use of pesticides on field crops, the total would be even more impressive than the $7 million cited.

Positive evidence of this character can become powerful sales tools for the pesticide trade in 1957. With reduced acreages, farmers can't afford the luxury of allowing insects, plant diseases, and weeds to reduce yields even to the slightest extent.

The industry's growing emphasis on sales and expanding markets can well utilize this type of ammunition.

Ability to Produce Is Great Source of Strength

A realistic approach to the current farm surplus problem was made by Marvin L. McLain, assistant secretary of Agriculture at a February meeting before the Michigan Bean Shippers' Assn.

Mr. McLain cited figures on the advances in farm production during the past 15 years, pointing out that national corn yields have risen from less than 30 to more than 41 bu. an acre; wheat has gone up from 15 to 19 bu.; and cotton from 240 to more than 400 lb. an acre. "The same trend holds for virtually all other crops," he said, and in addition, a similar increase has been seen in the output of livestock products, including milk.

"We have no regrets about this increased efficiency," he declared. "We welcome it, of course, and we want all we can get. Any attempt to keep some sort of past relationships by holding down scientific progress would be unthinkable. In fact, we must depend more and more upon increased efficiency in all operations, as the basis for ultimate solutions of some of our problems. The job is to learn how to use this efficiency effectively—how to live with the very abundance we can create.

"Speaking of abundance, I would like to call attention to one thing we sometimes overlook. In spite of the fact that our high production potential is a factor in the current surplus problem, let's go slow about regretting this fact. Agriculturally, we are definitely a 'have' nation. We can and do at times produce more than we can market effectively.

"It is true that this can cause serious price and management problems, at least for temporary periods. But what would be our real situation if we were a 'have not' nation agriculturally? What if we could not produce our essential needs of food and fiber? I think the answer is quite clear. As a deficit producing area, we would be in a vulnerable position.

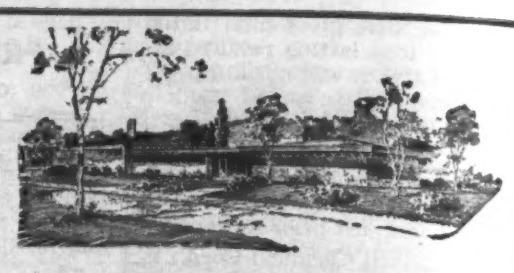
"I think there is an important point in that for all of us. Our agricultural productivity is really a part of our great national strength. Let's learn how to control it and use it wisely.

"The fact remains, of course, that the current surplus problem is still with us. It must be of immediate concern. Until we can restore a better balance between supply and demand, it will be very difficult to develop sound long-range operations."

Big Herbicide Potential

A sales potential of $12 million for herbicides in Canada by 1961 was declared likely by D. K. Jackson of Monsanto Canada, Ltd., in a recent talk before an agricultural chemical group there. "The market for 2,4-D itself is not anywhere near saturation," he said. "This is particularly so in the east where many more acres go uncontrolled than are sprayed, where low volatile esters now allow precise spraying, where roadside weed control is increasing in importance, and where 2,4-D with 2,4,5-T is proven economical for brush control on roadsides and rights-of-way."

Another justification for optimism, he said, lies in new herbicides to control weeds that could not be attacked before, because of crop susceptibility to 2,4-D injury.



Croplife

BPA — *Member of Business Publications Audit*

NBP — *Member of National Business Publications*

CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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MEETING MEMOS

April 8-10—National Institute of Animal Agriculture, Seventh Annual Meeting, Purdue University, Lafayette, Ind.

May 13-15—Carolinas-Virginia Pesticide Formulators Assn., Third Annual Spring Convention, Cavalier Hotel, Virginia Beach, Vt., W. R. Peele, Raleigh, N.C., Secretary-Treasurer.

EDITOR'S NOTE—The listings above are appearing in this column for the first time this week.

March 5—Nitrogen Day Institute, Turner Hall, Monroe, Wis.

March 5-6—Western Cotton Production Conference, Hotel Westward Ho, Phoenix, Ariz.

March 6-8—National Agricultural Chemicals Assn., Spring Meeting, Fairmont Hotel, San Francisco, L. S. Hitchner, 1145 19th St. N.W., Washington, D.C., Executive Secretary.

March 11-12—Southwestern Branch, Entomological Society of America, Annual Meeting, Gunter Hotel, San Antonio, Sherman W. Clark, 811 Rusk Ave., Houston 2, Texas, Secretary-Treasurer.

March 12-13—Missouri Aerial Applicators Short Course, University of Missouri, Columbia, Mo.

March 13-15—New Jersey Mosquito Extermination Assn. 44th Annual Meeting, Hotel Haddon Hall, Atlantic City, N.J., Dr. Bailey B. Pepper, Rutgers University, Secretary.

March 14-15—Oregon Feed & Seed Dealers Assn., Annual Meeting, Multnomah Hotel, Portland, Ore.; March 14 Morning Program Set Aside for Fertilizer Topics.

March 27-29—North Central Branch of Entomological Society of America, Annual Meeting, Des Moines, Iowa.

April 2—Western Agricultural Chemicals Assn.; Spring Meeting, Hotel Biltmore, Los Angeles, Cal.; C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., executive secretary.

April 14-15—Fifth Annual California Fertilizer Conference, Fresno State College, Fresno, Cal. Sponsored by California Fertilizer Assn., Sidney H. Bierly, General Manager, 475 Huntington Drive, San Marino 9, Cal.

June 9-12—National Plant Food Institute, annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 17-19—Fifteenth Annual Convention of the Association of Southern Feed and Fertilizer Control Officials, Dinkler-Tutwiler Hotel, Birmingham, Ala., Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 23-26—American Society of Agricultural Engineers, Golden Anniversary meeting, Michigan State University, East Lansing, Mich.

June 26-28—Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

July 10-14—Plant Food Producers of Eastern Canada, Manoir Richelieu, Murray Bay, Quebec.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvaz Hotel, Galveston, Texas.

Oct. 2-4—Eleventh annual Beltwide Cotton Mechanization Conference, Shreveport, La.

Nov. 3-5—California Fertilizer Assn. 34th Annual Convention, St. Francis Hotel, San Francisco. Sidney H. Bierly, General Manager, 475 Huntington Drive, San Marino 9, Cal.

Dec. 11-13—Agricultural Ammonia Institute, Seventh Annual Meeting, Hotel Marion, Little Rock, Ark., Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

1958

Jan. 13-15, 1958—Weed Society of America and Southern Weed Conference, Joint meeting. Peabody Hotel, Memphis, Tenn.

Plans Announced for California Conference

SAN MARINO, CAL. — The fifth annual California Fertilizer Conference, sponsored by the Soil Improvement Committee, California Fertilizer Assn., will be held on the campus of Fresno State College at Fresno, April 14-15. J. H. Nelson and Earl R. Mog, both of Stockton, are co-chairmen. They report that a program is now being developed which will be of interest to fertilizer company management; to fertilizer salesmen and dealers; to fertilizer research personnel of the University of California, California State Polytechnic College and other schools; the Department of Agriculture and to farm organizations and their members.

The Fertilizer Committee of the University of California will be guests of the Soil Improvement Committee at an annual joint dinner to be held at the Hacienda on Sunday evening, April 14. Chairman of the University Committee is Dr. E. Louis Proebsting, professor of pomology, Davis, and Millard E. McCollem, western manager, American Potash Institute, Inc., San Jose, is chairman of the Soil Improvement Committee. Following the formal program on April 15, technicians on the staff at Fresno State College will conduct a tour of the new college campus.

The Conference program on the morning of April 15 will feature reports to the entire assemblage of fertilizer research findings. Following luncheon on the campus in the new students cafeteria, two panel discussions will be featured, one on potash responses, and the other on minor element deficiencies. The morning session will be held in Room 121, McLane Hall, and the panel programs will be given in this room and in Room 161, McLane Hall. Lloyd Dowler, dean of agriculture at Fresno State College, and his associates are in charge of physical arrangements for the conference.

B. E. Elson Appointed By Chicago Steel Tank

CHICAGO — Chicago Steel Tank Co., division of U.S. Industries, Inc., recently announced that B. E. Elson has been appointed staff assistant to the general manager. The announcement was made by D. D. Cleghorn, general manager. Mr. Elson's main responsibility will be to direct special projects as assigned by the general manager and assist department heads in their specific functions of organization and procedure.

FRUIT GROWERS TO MEET

ST. PAUL, MINN.—A special program for commercial fruit growers has been scheduled on the University of Minnesota's St. Paul campus March 29, as part of the annual horticulture short course. The sessions will begin at 10 a.m. with motion pictures on insect control in fruit growing and mechanized packaging.

Charles C. Smith

51 YEARS SERVICE—Charles C. Smith, plant merchandiser of the Bemis Bro. Bag Co. at Buffalo, has retired after 51 years service. Mr. Smith joined Bemis at the St. Louis plant in 1906 as a member of the order department. He worked later in the sales field and covered assignments in Chicago, Indianapolis and Buffalo. Mr. Smith was appointed sales manager of the Buffalo sales division in 1939 and was assigned to his present position as plant merchandiser in 1955.

Kentucky Sales Show Increase in 1956

LEXINGTON, KY.—Fertilizer sales in Kentucky during 1956 totaled 532,000 tons, a gain of 2% over 1955 sales, according to the Kentucky Department of Feed and Fertilizer.

Mixed fertilizer tonnage last year was 440,000 tons, 6% higher than in 1955, while straight material tonnage amounted to 92,000, down 11% from 1955.

Leading grades in 1956 were 4-12-8, 94,719 tons; 5-10-15, 83,466 tons; 3-12-12, 47,452 tons; 6-8-6, 30,568 tons; 10-10-10, 23,466 tons; 2-12-6, 21,383 tons; 5-10-10, 20,525 tons and 6-12-12, 20,114 tons.

Included in the sales of materials were 26,312 tons of ammonium nitrate, 22,759 tons of superphosphate, 18-20% available, and 15,450 tons of potash materials.

Chipman Chemicals Ltd. Opens Quebec Office

MONTREAL — The opening of a Quebec sales office and pesticides warehouse at 2295 Aird Ave., Montreal, by Chipman Chemicals Ltd. has been announced by J. G. Hastings, general sales manager of the company.

Guy Hamilton, formerly with Canadian Industries Ltd., Agricultural Chemicals Division, will be in charge of the completely bilingual office staff.

Chipman Chemicals Ltd., a formulator and distributor of agricultural chemicals for the Canadian market, was reorganized in 1956 to merge its operations with the pesticides operations of Canadian Industries Ltd.

CORN FERTILIZER FOLDER

NEWARK, DEL. — The University of Delaware has issued a revised extension folder on fertilizing corn. The folder gives the latest recommendations for corn yields up to 100 bu. per acre during an ordinary good corn year, using about $20 worth of fertilizer an acre. Cover crops, corn hybrids, planting rates, weed control and avoiding stalk breakage are also discussed in the folder.

INDEX OF ADVERTISERS

'TOXAPHENE GIVES US OUR BEST CONTROL'

Jack McLemore, Jr., of McLemore Plantation near Montgomery, Alabama, is a man who finds out for himself the best methods of cotton production. "We used toxaphene altogether, then for a couple of years experimented with other insecticides," he says. "Now we've gone back to toxaphene as it gives us our best control."

In Texas, California, Mississippi, and other cotton-producing areas, growers are discovering what Jack McLemore found out in Alabama. Insecticides based on toxaphene protect cotton from the insect pests that attack it—without the complicating factors often encountered in an insect control program.

You can profit from the experiences of cotton growers who are now producing better yields with the help of toxaphene. For more information about the uses of toxaphene, get in touch with any of our offices below.

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